

AGRICULTURAL OUTLOOK

May 1989

Economic Research Service
United States Department of Agriculture



Farmland Values
Up 6 Percent, page 24

AGRICULTURAL OUTLOOK

May 1989/AO-152



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In

Brief. . . News of Planting Intentions, Exports, Farmland Values

Farmers said they intend to plant 9 percent more wheat, corn, and soybeans this year. The expansion is due primarily to sharply lower acreage reduction program (ARP) requirements and higher prices. Prospective cotton plantings, however, are down 12 percent, reflecting an increased ARP.

USDA's estimates of farmers' planting intentions are based on a survey of 65,000 farmers taken in early March. Actual spring grain plantings had not begun at that time, and as in past years, may vary from intentions. Changes in weather and market conditions between the survey and the farmers' final decisions to plant account for the difference.

Farmers said they will plant more acreage to processing vegetables, dry beans, tobacco, and sweet potatoes this year, probably in response to higher prices. Processors plan to contract for 10 percent more acres this year of the five major processing vegetables--snap beans, green peas, sweet corn, tomatoes, and cucumbers. Contracted area accounted for 97 percent of all processing vegetable acreage last year.

By mid-April, 76 percent of the Kansas winter wheat crop was rated poor or very poor, reflecting ongoing drought, wind damage, and winterkill. With 79 percent of the topsoil rated very short of moisture in mid-March, strong winds blew loose, abrasive topsoil against the greening wheat stands. Kansas usually produces about 17 percent of the total U.S. wheat crop.

March and April precipitation improved livestock forage conditions in some major livestock areas. If followed by normal or above normal precipitation, the improved moisture conditions could translate into reduced supplemental feeding for the beef herd, lower expected feed costs, and improved livestock producer returns.



Higher prices are pushing up U.S. agricultural exports \$2.7 billion to \$38 billion in fiscal 1989 (October-September). Despite a drought-reduced crop, the U.S. has helped maintain its exports by drawing down stocks. The U.S. is expected to capture about 25 percent of world agricultural export volume, close to the long-term average.

For the year ending in February, farmland values are up 6 percent from a year earlier. This marks the second consecutive year that farmland values have risen, after a 5-year drop that began in 1983. In inflation-adjusted terms, farmland values rose about 1 percent last year. Farmland values were up in all farm production regions, except the Southern Plains.

As a result of the U.S.-Canada Free Trade Agreement, the other countries that sell meat to the U.S. have the opportunity to increase their sales to the U.S. But with low supplies in the exporting countries and new markets opening in Asia, the exporters are not likely to significantly boost sales to the U.S. in the near term.

Under President Bush's savings and loan (S&L) reform plan, about 50 rural S&L's will be taken over by Federal regulators and put up for sale or liquidated. The 900 or so surviving rural S&L's will have to pay more for Federal deposit insurance, and most will also have to raise more equity. So, at least for the near term, farm and rural borrowers may find S&L's less aggressive in making new loans. About a third of all S&L's are headquartered in rural areas.

Preliminary estimates show that irrigated land in farms rebounded from a low of 42 million acres in 1983 to 46 million in 1988. Irrigated area in 1989 could be the highest since 1982, reflecting strong crop prices, moderate energy prices, and low ARP's.

Farmers are increasing their use of fertilizer by 8 percent to 21 million nutrient tons this year. Fertilizer demand is likely to remain strong unless economical substitutes or alternative--and profitable--farming practices can be found.

Even though world cereal stocks are the lowest in 8 years, production is up in almost all of the countries that often have trouble meeting domestic food needs. All but one of the 55 countries for which USDA assesses cereal shortfalls had exceptionally good crops in 1988/89. The good news is tempered by the higher prices the countries are paying for cereal imports and their need to rebuild stocks.

Globally, world food production is expected to grow in tandem with population for the rest of this century. The larger challenge will be the distribution of food from surplus regions to deficit regions.

Rural U.S. economic problems may have eased. Rural employment grew an average of 2 percent last year, near the national rate of 2.2 percent, according to preliminary data. This is in sharp contrast to 1982-86, when rural employment growth averaged less than half the national rate.



Agricultural Economy

Food Supply Outlook Mixed For Developing Countries

Even though world cereal stocks are the lowest in 8 years, production is up in almost all the countries that often have trouble meeting domestic food needs. Of the 55 developing countries for which USDA's Economic Research Service assesses food needs, 1988/89 cereal production fell only in Tunisia. Almost all of the countries had exceptionally good crops in 1988/89, which came on the heels of a drought-plagued year of domestic shortages.

The good news about developing countries' production is tempered by the higher prices they are paying for cereal imports, and their need to rebuild stocks. As a result, the 55 countries face estimated cereal shortfalls of 17.1 million tons, down only 2.4 million tons from 1987/88. The estimated shortfall is the volume of imports the countries need, but are not able to import commercially, to keep consumption at recent levels and maintain some stocks.

The estimates of recent consumption are based on average per capita consumption during the past 4 years, excluding years of extremely high or low consumption, and on estimated population growth. The affordability estimates take into account export performance, commodity prices, and factors influencing foreign exchange availability, including projected

international debt repayments. International food aid can help meet these shortfalls, but has declined slightly this year.

Shortfalls Vary Across Countries And Are Not the Whole Story

On a per capita value basis, food shortfalls are most pronounced in Jamaica, Costa Rica, Tunisia, Cape Verde, Swaziland, and Liberia. For example, Jamaica needs an estimated \$79 per person to cover its shortfalls, while Liberia needs about \$37 per person. About 17 million people live in these six countries.

In contrast, eight countries that once had serious shortfalls now have sufficient domestic production, or are expected to import enough cereals to maintain usual consumption without depleting stocks. The countries are Burkina Faso, Chad, Gambia, Mali, Niger, Sudan, Uganda, and Zambia.

A shortfall from recent use, however, says little about how far a country is from meeting some minimum nutritional standard. Using minimum national caloric requirements estimated by the United Nations' Food and Agriculture Organization, 1988/89's shortfall for the 55 countries is 34 million tons—about double the shortfall based on recent use.

The shortfall estimates assume that the food is distributed to the people who need it. In countries like Sudan, where civil unrest hampers food distribution, starvation is a serious problem. But at the national level, no cereal shortfalls are forecast for Sudan in 1988/89.

1989/90 Could Be Better

Using trend analysis, the total cereal shortfall from usual consumption in 1989/90 is expected to drop by about 2 million tons for the 55 developing countries. The 14-percent decline reflects improved production and less need to build stocks.

The estimated shortfall, however, depends heavily on weather and economic developments in coming months. Shorter supplies and higher prices, for example, could mean higher import costs than currently projected. Then the 14-percent decline in shortfalls likely would not materialize.

An Opportunity To Build U.S. Farm Exports

With U.S. domestic use of cereals growing slowly over the past decade, exports will continue to provide the major outlet through which U.S. farmers can expand their markets.

Many of the 55 developing countries are players in international cereals markets, but only on concessional terms. Yet about 1.9 billion people live in these countries, accounting for about two-fifths of the world's population. Together they represent a large potential commercial market for U.S. farm exports.

But the countries are poor, and many have stagnant economies. Some are overburdened with international debt that saps their ability to grow and import agricultural commodities. Others have government regulations that depress prices paid to local farmers, so that urban consumers may benefit from lower food prices. These regulations hinder the development of a market-oriented farm economy, and cut farmers' incentives to produce.

History has shown that policies promoting agricultural-led development in the context of a market-oriented economy actually boost developing countries' agricultural imports. For example, Korea now imports more food annually from the U.S. than the U.S. ever gave to it in food aid. Investment in rural infrastructure that helps farming grow (i.e., roads, dams, irrigation projects, etc.) tends to boost incomes across the board in developing countries.

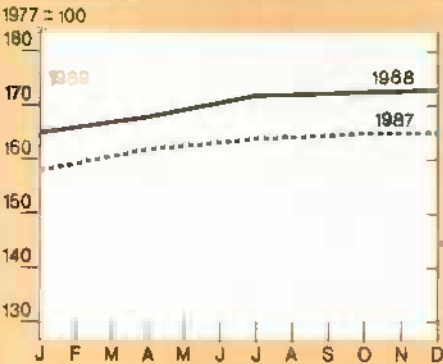
These development policies focus on the domestic farm products which the country can produce most efficiently. Exports of one or two commodities may rise, but with a multiple effect on local incomes.

As incomes rise, people increase their demands for better food, including meats and processed products. Increased meat demand consequently leads to greater demand for feed grains. So, on balance, demand for agricultural imports rises.

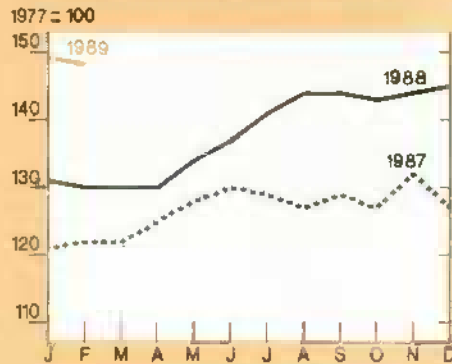
Food aid has been, at times, tied to making necessary policy changes. Such aid increases labor's diet and productivity, and has had a positive influence

Prime Indicators of the U.S. Agricultural Economy

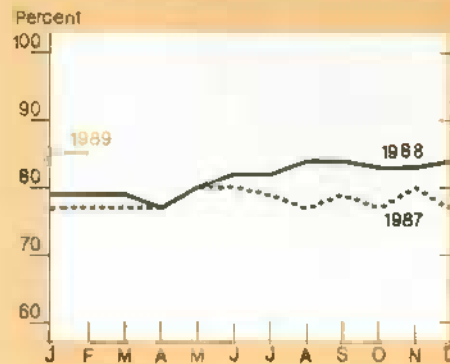
Index of prices paid by farmers¹



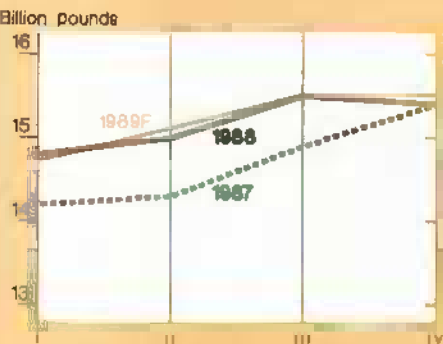
Index of prices received by farmers²



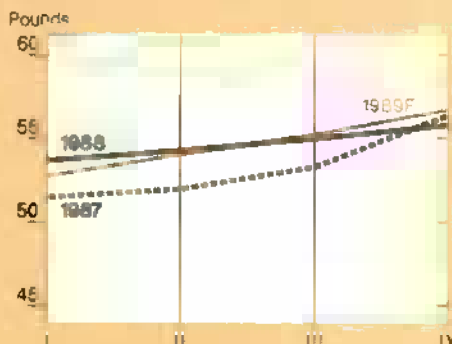
Ratio of prices received to prices paid



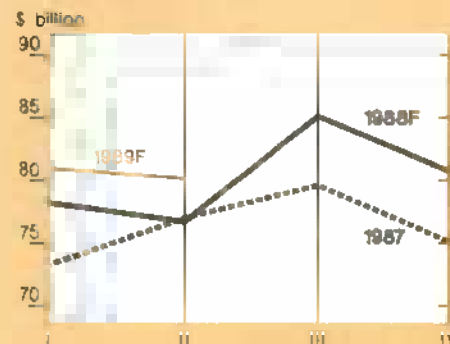
Red meat & poultry³ production



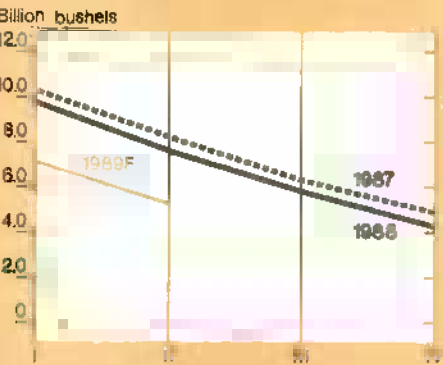
Red meat & poultry consumption, per capita^{3,4}



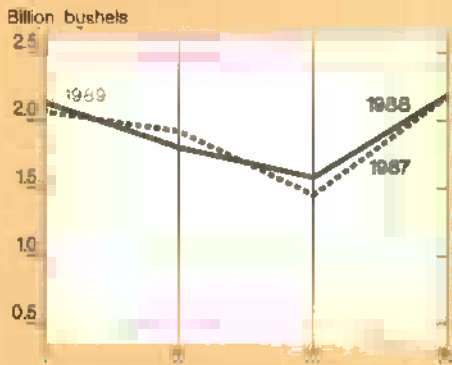
Cash receipts from livestock & products⁵



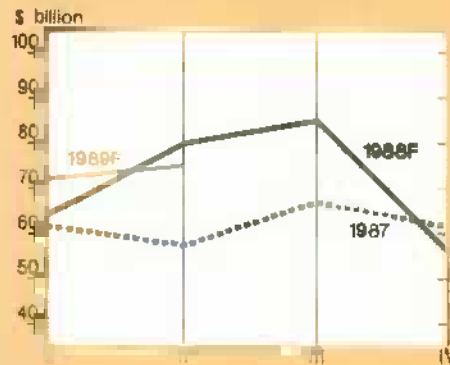
Corn beginning stocks⁶



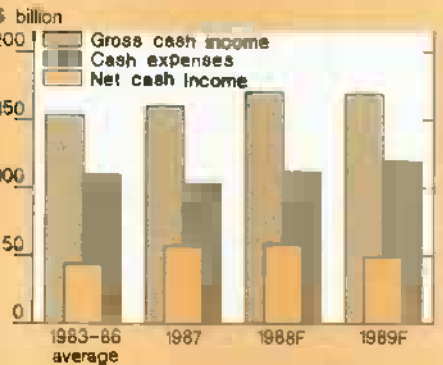
Corn disappearance⁶



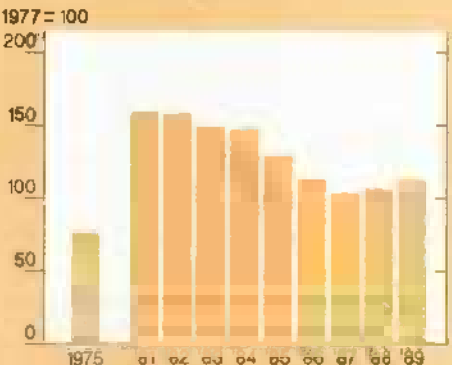
Cash receipts from crops⁵



Farm net cash income



Farm real estate values



Farm value/retail food costs



¹For commodities and services, interest, taxes, and wages. Beginning in 1986, data are only available quarterly. ²For all farm products
³Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. ⁴Retail weight. ⁵Seasonally adjusted annual rate
⁶I=Dec.-Feb.; II=Mar.-May; III=June-Aug.; IV=Sept.-Nov. F=forecast.

on economic growth in a few countries. But food aid can hamper a recipient country's long-term prospects if it is not linked to policy changes. Massive inflows of free or subsidized food weaken domestic farm prices and reduce local farmers' incentives.

Distribution, Not Global Production, Is the Challenge

Despite concerns raised by last year's North American drought, global food production is not expected to be the long-term problem (see the special article on food availability). But the distribution of food has been and will continue to be a problem that merits attention. Because population growth is expected to continue to outpace economic growth in many of these developing countries, the distribution problem likely will become more serious. [Gregory Gajewski (202) 786-3313 and Ray Nightingale (202) 786-1680]

Livestock Overview

Rain Improves Forage Prospects

Rains in March and April in parts of the Plains and Corn Belt are good news for livestock producers in the near term and for consumers in the longer term. Following unusually dry conditions from November through February, the rains began to provide a foundation for improved forage conditions in areas where forage and hay were running short.

The precipitation means that grazing conditions should improve, particularly in some major livestock-producing areas. Continued normal to above-normal rainfall will be necessary to compensate for poor subsoil moisture conditions in many areas.

In addition, the hay crop will need to get off to a good start, so farmers can begin to rebuild depleted stocks. Planting-season prospects for coarse grains have improved in many areas and should result in lower feed prices for cattle, hogs, and poultry, as well as for dairy cattle.

Improved moisture conditions translate into reduced supplemental feeding for

Beef Market Changing To Meet Consumer Preferences

Consumers now demand table cuts with less external fat, and leaner ground beef. Increased processing (i.e., boning and trimming) services are being performed in the marketing chain in order to supply leaner, higher valued beef cuts.

More value-adding processes are shifting from retailers to packers because of widely adopted "boxed beef" technology, reduced transportation costs, and economies of processing and marketing fat, trim, and bone. Processors can use trimmable fat and bone, as well as lesser quality meat trimmings, more efficiently than retailers or consumers.

the beef herd, lower expected feed costs, and improved producer returns. These factors may result in more females retained for herd expansion. This would reduce meat production in the short run, while the long-term prospects are for larger meat supplies at lower retail prices than would otherwise occur.

Beef Prices Expected To Decline

The retail price of Choice beef this March was a record \$2.69 per pound, 8 percent above a year earlier, but only 3 percent above the June average.

Beef prices are expected to decline modestly during April-June because of increasing supplies of fed cattle and continued relatively low pork prices. Cattle slaughter in March was 2 percent below a year ago. However, increased marketings from early placements should provide increased fed cattle supplies this spring and early summer.

Net cattle placements into feedlots during November 1988-February 1989 exceeded those of a year earlier, as many cattle were pulled off wheat pasture ahead of schedule. Poor grazing conditions and lower supplies of other forages prompted the move. But placements were probably lower than last year this March, and perhaps in April. The earlier placement this year should increase fed cattle supplies in the coming months.

Because more trimming is taking place before retail sale, fewer pounds of the new "leaner" beef can be sold per carcass. And the price per pound is higher. These changes should be considered when using the retail price series for Choice beef and when comparing present and past retail prices.

The present conversion factor for carcass to saleable retail meat yield is 71 percent. Until 1986, the conversion factor was 74 percent. So the prices that are used to construct the retail price series are not fully comparable over time.

Tables 8 and 10 in the back of every *Agricultural Outlook* contain selected beef price series. [Fred White (202) 786-1285]

Poor Returns Depress Hog Production

The U.S. hog and pig inventory was estimated at 52.5 million head on March 1, 1989, slightly larger than a year earlier. However, the number of hogs kept for breeding declined 2 percent, while market hog inventories showed a 1-percent increase.

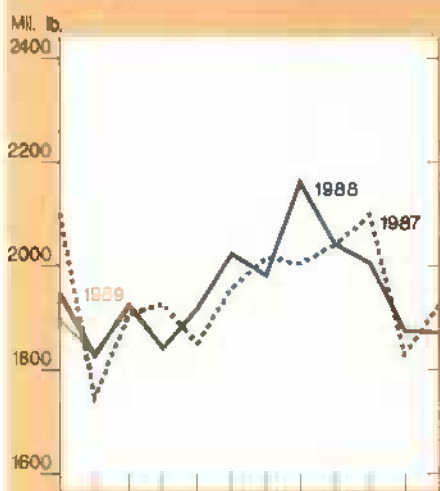
Hog producers are cutting production in response to poor returns, which averaged below breakeven in the final quarter of 1988 and the first quarter of 1989. Cutbacks began last fall with fewer sows and gilts bred, leading to a 2-percent decline in farrowings during December 1988-February 1989. Producers intend to have 3 percent fewer sows farrow during March-May 1989 than a year earlier, and 4 percent fewer during June-August.

Even so, farrowing intentions may reflect some optimism among producers regarding future profitability. In spite of lackluster hog prices and continued poor returns, March-May 1989 farrowing intentions actually rose 2 percent between December 1 and March 1.

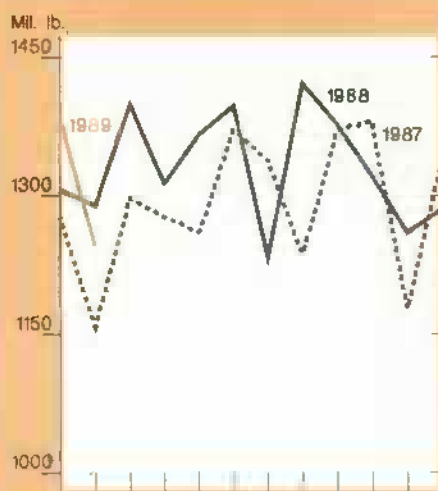
Also, the year-over-year decline in farrowing plans is small compared with past liquidation phases of the hog cycle. Producers may have been encouraged by prices of deferred futures contracts, which have maintained a substantial premium over cash prices.

Production of Livestock and Products

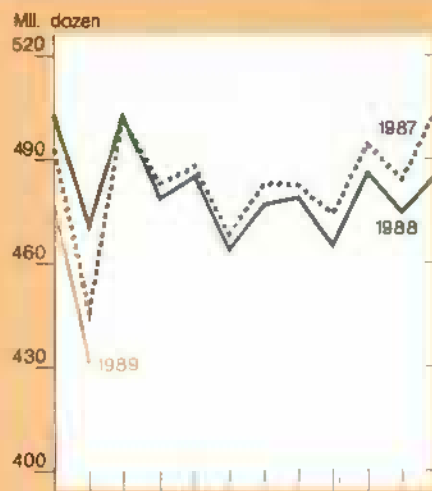
Commercial beef



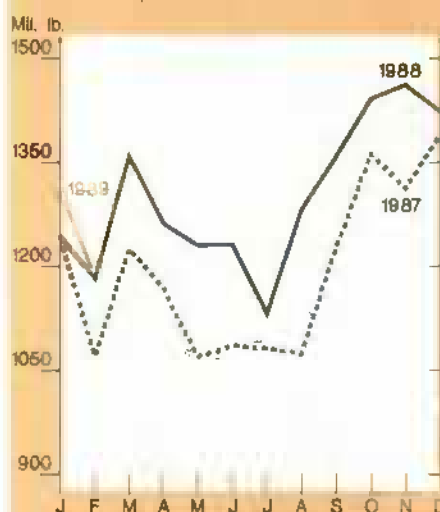
Broilers¹



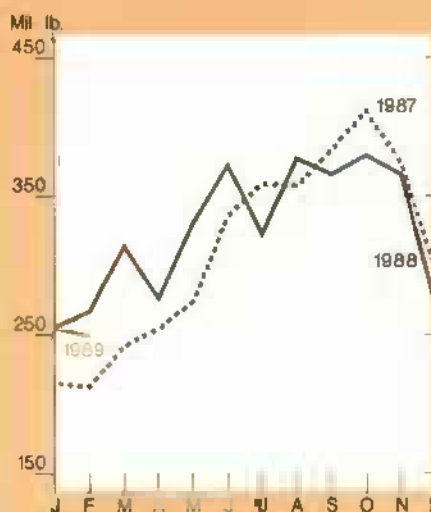
Eggs



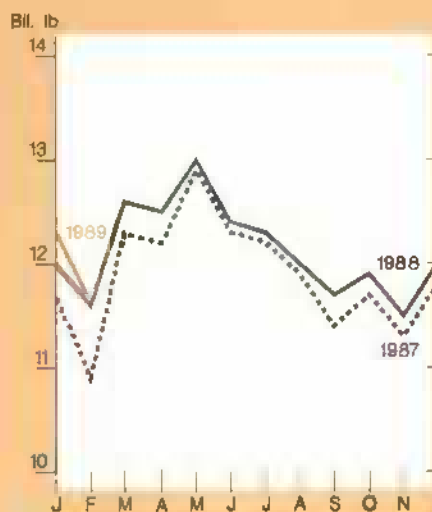
Commercial pork



Turkeys¹



Milk



¹Federally inspected production, ready-to-cook.

Assuming normal crop conditions this summer, returns to hog producers are expected to average near or below breakeven through most of 1989. Thus, the modest decline in hog production is expected to persist until late in the year, when breeding inventories may stabilize. Should poor crop conditions again drive feed costs higher, hog production likely would be further curtailed.

In any case, 1989 pork supplies are not likely to drop below 1988 levels until the second half of the year. Commercial pork production was up about 2 percent in first-quarter 1989, and second-quarter

production may be unchanged. A projected 2-percent decline in the second half would bring 1989 pork production to about 15.5 billion pounds, less than 1 percent below the 1988 total.

For the year, barrow and gilt prices are expected to average around \$43 per cwt, about the same as in 1988. The low for the year may have already been established, as prices slipped into the high \$30's in late March. A peak near \$50 is likely during the current quarter, followed by a moderate downtrend into the fall. Prices could return to the high \$30's during the fourth quarter.

Broiler Prices Increase

Wholesale broiler prices rose sharply in the first half of March, reflecting the short-term impact on production from ice storms in northwestern Arkansas and adjacent areas in Oklahoma and Missouri. Average March prices, at 62 cents per pound, were 4 cents above the February average and 24 cents above a year ago.

The 12-city wholesale composite price for broilers was 59.4 cents per pound in first-quarter 1989, up from 45 cents a year earlier. Prices in the second quarter may average 58-62 cents. Prices should hold through most of the third quarter be-

The U.S. Hog Industry More Specialized

In post-Civil War days, nearly every rural household had a few hogs. The hogs provided pork to eat, and lard to use for cooking, as a lubricating material, and for soap. There were about 35 million hogs and pigs on U.S. farms in 1867. By the turn of the century, the hog population had risen to about 51 million head, and by 1919 it exceeded 64 million head.

Since the 1920's, hog numbers have remained relatively constant, ranging between 50 million and 70 million head, except for brief lows during the Great Depression and highs near the end of World War II. Hog production has been concentrated in the North Central and Southeastern States. The proportion of hogs in the North Central States has risen from about two-thirds in the early 1900's to about four-fifths today, while the Southeastern States' share has declined from about 30 percent to 12-15 percent.

In the early 1900's, hogs were generally kept in a pasture or barnyard setting. Producers sold a few hogs on a seasonal basis. This basic pattern continued until the 1960's, when a revolution in hog production began.

Production moved into specialized buildings and finishing floors. Operations became larger, more specialized, and more capital intensive. As operations became more specialized, seasonal marketing patterns diminished.

Most hogs are slaughtered 6 to 7 months after birth. About 95 percent of slaughtered hogs are barrows (young castrated males) and gilts (young females). Boars (mature males) make up about 1 percent of slaughter, while sows (mature females) account for the remainder.

A sow farrows litters of 7-9 pigs weighing about 2-1/2 pounds each. At 4 to 6 weeks of age, the pigs are weaned from the sow and are either fed until they weigh 40-60 pounds and are sold as feeder pigs, or until they weigh 220-240 pounds and are sold as slaughter hogs. Some females (gilts) are retained after weaning and placed in a breeding herd.

There are three types of hog enterprises: farrow-to-finish operations, in which all phases of slaughter hog production are carried out in one operation; feeder-pig production, in which farmers produce pigs and sell weaned pigs to others for finishing; and feeder pig finishing.

Farrow-to-finish operations offer several advantages over split-phase operations, especially for farms in corn-surplus areas. Producers can control the number, quality, and timing of the pigs they finish. They avoid the problems and costs of buying feeder pigs, which include losses and stresses in moving pigs, introducing new diseases on the farm,

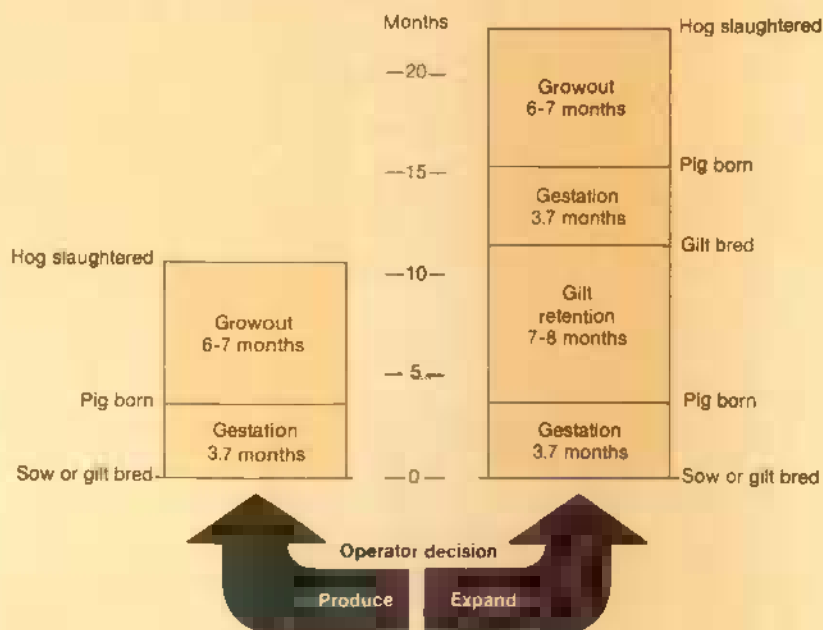
and purchasing pigs of unknown characteristics.

Yet farrow-to-finish operations require a more even balance of resources than do split-phase feeder pig production and finishing operations. In feeder pig operations, labor is the dominant input cost, while in finishing operations, feed costs are dominant.

Feeder pig production is relatively more important in the Southeast, and in some adjacent States where corn and hog production is concentrated. For example, in 1982 feeder pigs accounted for 34 percent of total hog and pig sales in Wisconsin and 48 percent in Arkansas, compared with 18 percent in Iowa.

However, States with large hog production also produce large numbers of feeder pigs, although those States are seldom identified as a major source. Iowa recorded sales of 4.3 million head of feeder pigs in 1982, more than any other State, and 10 times more than Arkansas.

Hog Expansion Takes 19-22 Months



Feeder pig prices swing widely. When hog prices and costs are favorable for slaughter hog finishing, feeder pigs are in demand and command a high price. When conditions reverse and there is little incentive to feed hogs, feeder pig prices drop sharply. Feeder pig prices exhibit much wider swings than slaughter hog prices.

As long as the practice of selling feeder pigs outright continues to have some price risk, aggravated by unknown quality, the number of feeder pig operations is not likely to increase significantly. Some farrow-to-finish operators sell (or purchase) feeder pigs if their hog production is greater (or smaller) than their feed production.

When high returns provide incentives to expand, producers increase the number of animals kept for breeding. The breeding inventory rises or falls depending on the relative rates of gilt retention and sow slaughter. The higher the gilt retention rate, the smaller the near-term slaughter, while the larger breeding inventory leads to larger pork production in the longer term.

Pork production can be expanded more rapidly than beef production because of multiple births, a shorter gestation period, and a shorter growout period. Cows generally have one calf per year, while sows may have two litters of 7-9 pigs each. Following a nearly 4-month gestation period, 7-8 months are required to grow a gilt to breeding age. So second generation offspring grow to slaughter weights within 19-22 months.

The biological lag is at the root of historical increases and decreases in pork production, often called "the hog cycle." If returns become unfavorable, producers can cut the herd by slaughtering gilts and sows in the breeding herd. Herd reduction increases pork production in the short term, until hog numbers decline and production finally drops. [Leland Southard (202) 786-1283]

cause of seasonally higher summer demand. The average wholesale price for 1989 is expected to range from 56 to 60 cents, up slightly from a year ago.

Broiler production during first-quarter 1989 likely was up slightly compared to a year earlier. Second-quarter production likely will increase 4 percent, as suggested by the February hatch and March weekly chick placements. In addition, the February hatching egg flock, which is predominantly broiler-egg layers, was 1 percent larger than a year earlier. Broiler production is forecast to increase 5 percent this year.

Broiler Exports To Fall

U.S. broiler exports are expected to fall slightly in 1989, although uncertainties arise from changes in export programs and importer policies. The 1989 outcome partially hinges on how Japan's increased beef imports will affect its poultry imports. In addition, Thailand's exports, which lost market share to the U.S. in 1988 due to production problems, are expected to grow faster this year.

U.S. exports to Mexico and Jamaica may decline as Mexico changes policies and Jamaica's poultry industry recovers from hurricane losses. The U.S.-Canada Free Trade Agreement is expected to increase U.S. broiler sales to Canada.

Broiler meat exports in January, at nearly 60 million pounds, dropped from December but surpassed year-earlier levels by 4 percent. Value was up 6 percent to \$27 million.

So far, Japan's purchases of U.S. broiler meat have continued to rise. Japan took 36 percent of total U.S. exports and was the largest buyer, while Hong Kong took 18 percent. Mexico and Jamaica were also large buyers, both posting increases over a year ago. Conversely, Iraq and Egypt, large importers under the Export Enhancement Program (EEP) a year ago, made no purchases this January due to increased domestic production and policy changes that cut their imports.

Turkey Production Slows, Prices Strengthen

Estimated turkey production during first-quarter 1989 was below a year earlier, and production for 1989 overall is ex-

pected to increase around 3 percent, down from last year's 5 percent. Cumulative turkey placements from September 1988 through February 1989 were only 2 percent ahead of a year earlier. In 1988, placements were running 11 percent ahead of 1987.

Turkey stocks increased slightly less than 1 percent during February, to 265 million pounds as of March 1, but were 18 percent below a year earlier. Stocks fell as consumption continued to outstrip production through the first quarter.

Lower stocks and slower production than a year earlier are reflected in higher prices. Wholesale hen turkey prices in the East rose to nearly 67 cents per pound in March, much above the depressed prices of a year ago. Prices during the first quarter, at 62.4 cents, were 13 cents above first-quarter 1988, and were the highest since 1984 and 1985. Average annual prices are expected to be about 69 cents.

Turkey exports probably will drop during 1989, as higher U.S. prices are expected and uncertainties continue concerning import tariffs and other trade policies in major markets such as West Germany, Egypt, and Mexico. However, Taiwan has agreed to an import quota of 992,000 pounds per month for 1989. If this quota is fully used, exports will increase significantly.

Turkey meat exports totaled 2.3 million pounds in January, the lowest since August 1987. The largest buyer was Mexico with 763,000 pounds, followed by France with 185,000 pounds.

Egg Production To Decline

Total egg production (table and hatching) in 1989 is expected to decline about 3 percent, while per capita consumption is forecast at about 234 eggs, about 10 below 1988. At the beginning of March, the table egg-type laying flock, which began 1989 about 6 percent below a year earlier, was down about 5 percent from a year ago.

The flock is expected to continue decreasing through June, following a normal pattern of seasonal lows in June-July and highs in November-December. The large decline in egg production will likely provide significant strength to prices during the year.

Wholesale prices for grade A large eggs in New York City are projected to average 71-77 cents per dozen in 1989. Fourth-quarter 1988 prices averaged about 67 cents per dozen, while first-quarter 1989 prices averaged 79 cents. Prices were volatile in both quarters. Egg prices are projected to fall to the 70-cent area during the second quarter, and then strengthen modestly in the last half of 1989.

Estimated net returns to egg producers were minus 5 cents per dozen during 1988, after weighting by production. Weak egg prices in the first half and a sharp rise in feed costs during the second half (which more than offset higher egg prices) caused most of that year's poor returns.

Net returns likely will be well above breakeven for 1989. Much higher wholesale prices in March increased estimated net returns for the first quarter. Second-quarter net returns are projected to be near breakeven. During the second half of the year, continued lower egg supplies and sharply lower feed prices could push net returns back into the 5-10 cent range.

Egg Exports Expected To Fall

Egg exports are expected to decline during 1989, partly reflecting higher U.S. egg prices. Exports during January, at 8.3 million dozen equivalent, were up 8 percent from a year ago. Value was up nearly 10 percent to \$6.7 million.

Egg products made up 61 percent of exports, hatching eggs 21 percent, and table eggs 18 percent. While egg product exports were up 40 percent and hatching eggs were up 9 percent over last January, table egg exports fell 40 percent.

Japan accounted for 70 percent of egg product exports, and Mexico took 10 percent. Iraq accounted for 37 percent of hatching egg exports under a Commodity Credit Corporation export credit guarantee. Hong Kong took 50 percent of U.S. table egg exports.

Milk Output Likely To Grow

Milk production rose substantially in early 1989, despite much higher feed

costs. Output is likely to continue expanding through the end of 1989. For the year, milk production is expected to rise about 2 percent from 1988's 145.5 billion pounds.

The number of milk cows in February was down slightly from last December and more than 1 percent below a year earlier. Sharply higher feed costs have pushed out more dairy producers in 1989, resulting in a 7-percent January-February increase in dairy cow slaughter.

However, more of the remaining producers apparently have embarked on an expansion course. Producers had been cautious about expanding in recent years, devoting most of their attention to reducing costs and debt load. The number of cows will probably continue to slip during the rest of 1989.

The milk-feed price ratio was less than 1.6 during January-March, down from more than 1.7 a year ago and far below the 1.9 of 2 years ago. Relatively low ratios since mid-1988 have trimmed normal growth in concentrate feeding rates. The milk-feed price ratio is the average number of pounds of concentrate feed that one pound of milk will buy.

Even so, milk per cow continues to post large gains, in part reflecting the very high quality of last year's forage. Milk per cow probably will continue to rise briskly, although restrained concentrate feeding might make output per cow particularly sensitive to forage quality and other factors.

Revised estimates put 1988 milk production at 145.5 billion pounds, up 2 percent from 1987. Year-to-year output gains shrank from 3 percent in early 1988 to less than 1 percent at midyear, but strengthened during the second half to almost 2 percent by late 1988.

There were an average 10.2 million milk cows in 1988, down about 1 percent from 1987 and a record low for the century. However, milk production per cow was 14,213 pounds, up almost 3 percent from 1987.

For further information, contact: Ken Nelson, coordinator; Fred White, cattle; Kevin Bost, hogs; Lee Christensen and Larry Witucki, broilers, turkeys, and eggs; and Jim Miller and Sara Short, dairy. All are at (202) 786-1285.

Field Crops Overview

U.S. Grain and Oilseed Area To Expand in 1989

Area planted to wheat, corn, and soybeans for harvest in 1989 may increase about 9 percent to over 209 million acres, according to USDA's Prospective Plantings report, issued on March 31. The expansion is due primarily to sharply lower acreage reduction program (ARP) requirements and higher prices. Prospective cotton plantings, however, are far below last year.

Estimated planting intentions are based on a USDA survey of 65,000 farmers taken March 1-15. Actual planting of spring grains had not begun in most areas at the time of the survey, and as in past years, may vary from intentions, depending on weather and economic conditions at the time of planting.

USDA's quarterly *Grain Stocks* report, also released in late March, shows lower supplies and inventories brought on by last year's drought. As of March 1, 1989, corn, soybean, and wheat inventories amounted to 7.3 billion bushels, down from 10.7 billion in March 1988 and 11.8 billion in 1987.

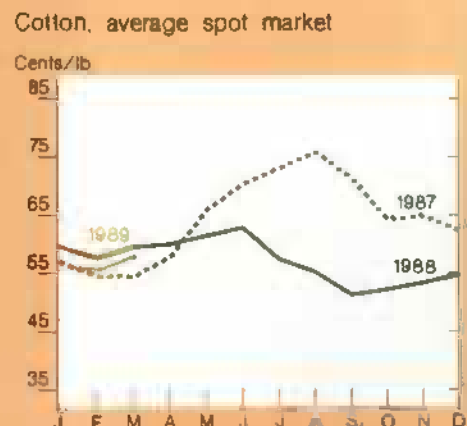
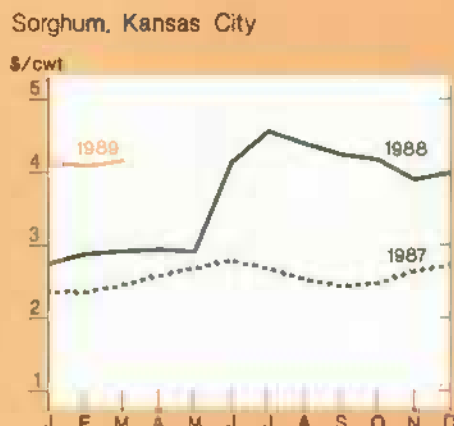
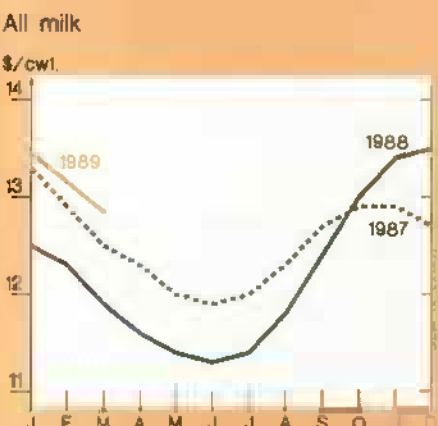
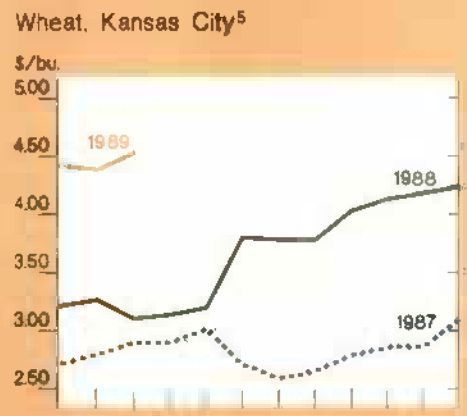
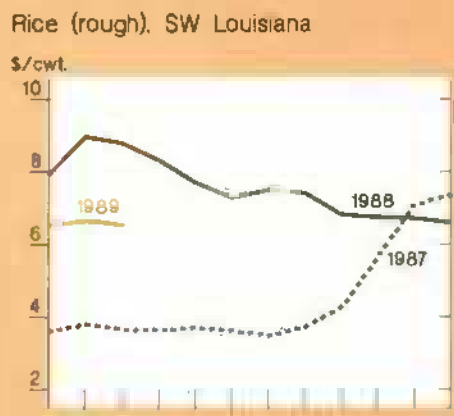
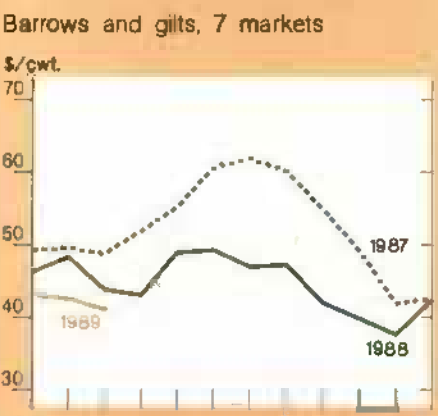
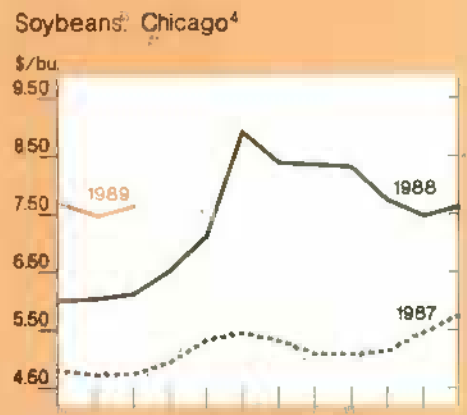
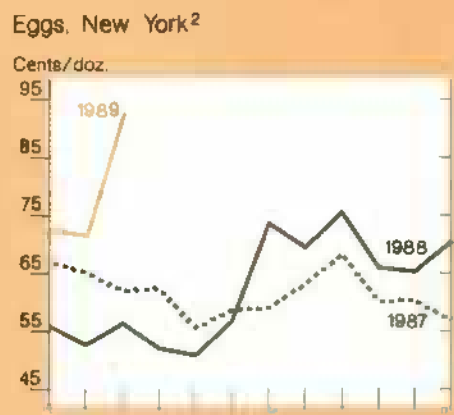
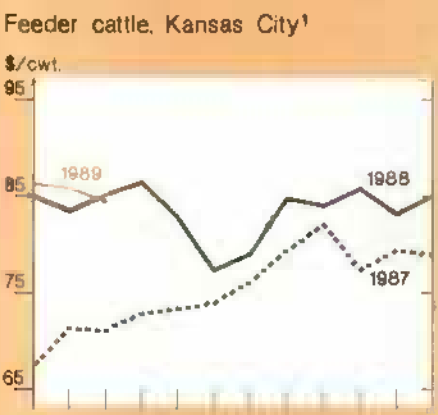
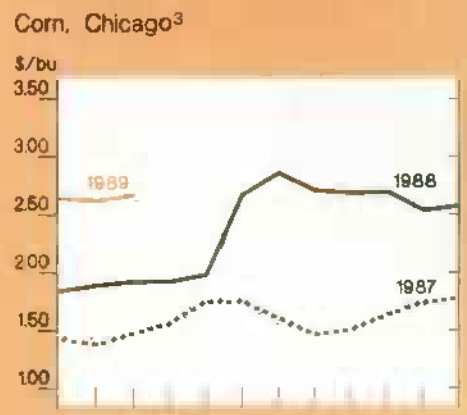
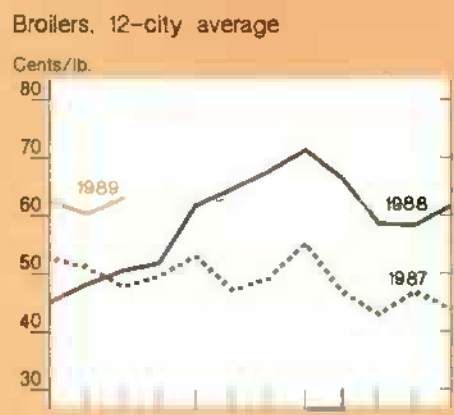
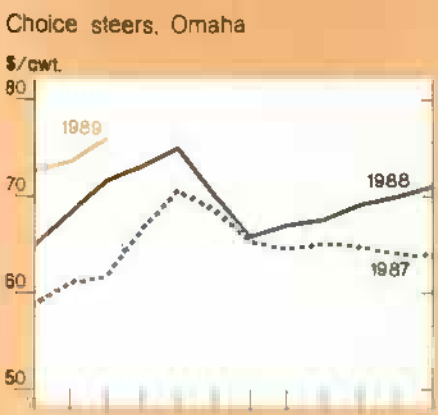
Wheat Planting Intentions Up 13 Percent

Farmers said they plan to sow 79.4 million acres to food grains (wheat, rice, and rye) in 1989, up about 12 percent from a year earlier. All but about 5 million acres of the planned area is for wheat. With a slight contraction in the areas farmers will devote to rye and rice, virtually all of the planned expansion will be for wheat.

Prospective plantings for all wheat varieties are up about 13 percent. The likely area planted to durum and other spring varieties, however, is projected to increase about 17 percent, to more than 19.5 million acres.

Almost all of the durum increase is in North Dakota, easily the largest producing State. North Dakota, South Dakota, Minnesota, and Montana account for the bulk of the other spring wheat area,

Commodity Market Prices



¹600-700 lbs., medium no. 2. ²Grade A large. ³No. 1 yellow. ⁴No. 2 yellow. ⁵No. 1 HRW.

where farmers said they intended to plant 15.7 million acres, up 2.3 million from a year earlier.

Kansas winter wheat conditions continue to be a concern. By mid-April, 76 percent of the crop was rated poor or very poor, reflecting drought, high winds, and occasional sub-freezing temperatures. Central and Western Kansas have been particularly hard hit. With 79 percent of the State's topsoil moisture rated very dry, the crop was susceptible to wind damage.

Blowing dust worsened crop conditions in mid-March, as strong gusty winds blew loose, abrasive topsoil across thin greening wheat stands. Kansas usually produces about 17 percent of the total U.S. wheat crop.

U.S. wheat stocks totaled 1.2 billion bushels as of March 1, 1989, down about 700 million from a year earlier. Most analysts had anticipated the extent of the decline.

Global Supplies Remain Tight

While the volume of U.S. wheat exports is forecast 5 percent below 1987/88, the U.S. market share is expected to rise from 41 to 42 percent. Most major exporters will enter 1989/90 with reduced stocks, so exportable supplies will largely depend on 1989/90 production. However, competition for world wheat markets could be stronger in 1989/90 if global production increases as expected.

Foreign winter wheat production is generally off to a good start, based on a mild winter and adequate moisture in the major producing areas, including the northern EC, portions of the USSR, and China. The first USDA forecasts of U.S. and foreign wheat production will be published on May 11.

World food grain supplies remain tight owing to reduced 1988/89 wheat production, low stocks, and strong demand. While record rice production is forecast for 1988/89, stocks relative to use are the lowest since 1974/75, keeping export prices relatively high.

Import demand is expected to remain strong through 1989, as Asian countries,

including India, Indonesia, and the Philippines, seek to rebuild depleted rice reserves. World rice trade is expected to reach 12.5 million tons, up 4 percent from 1988. Importers may turn increasingly to Thailand and the U.S. because other exporting countries, including China and Pakistan, have reduced supplies.

Corn Intentions Up 8 Percent

Farmers said they intend to plant corn on 73.3 million acres in 1989, up 8 percent from last year and up 11 percent from 1987. These intentions reflect eased acreage reduction program requirements and a relatively high expected corn price. The season average corn price for 1988/89 is projected to range between \$2.45 and \$2.70 per bushel, up about 60 cents from a year earlier.

Farmers said they plan to plant 11.8 million acres of sorghum this year, up 14 percent. Prospective oats plantings are down 5 percent, to 13.2 million acres.

Planting intentions for corn are somewhat lower than had been predicted by many analysts. While the USDA survey results on intentions were at the lower end of most private-industry forecast ranges, some estimates were as much as 3.5 to 4 million acres larger.

Farmers in the major feed grain producing States of Iowa and Illinois said they plan to increase their corn plantings by about 1 million acres in each State. Most States showed a gain in sorghum area. Sorghum area in Kansas is forecast to rise by 6 percent, Texas by 30 percent, and Nebraska by 16 percent. The three States together may account for almost three-quarters of the nation's planted area.

Oats seedings in Iowa, Illinois, and Indiana may be down sharply, because farmers are expected to use less oats as a cover crop on ARP land. Nevertheless, actual harvested area may increase later this year with favorable weather and continued favorable price expectations.

Corn stocks on March 1, 1989, stood at 5.2 billion bushels, down from 7.6 billion a year earlier. About 60 percent of the

total was stored on farms. Many trade analysts were surprised at the size of the inventories; many had projected stocks to be 300 million bushels lower.

U.S. Corn Exports Higher

Buoyed by large Soviet purchases, U.S. corn export sales continue to run above last year's pace. As of April 16, U.S. export commitments to all destinations totaled 41.2 million tons, up 15 percent from a year earlier. Commitments to the Soviet Union had reached 13.3 million tons, more than 3 times higher than a year earlier.

Argentina's lack of exportable supplies likely is contributing to the higher Soviet demand for U.S. corn. The corn harvest in Argentina is expected to be more than 40 percent below last year because of a drought, and exports are projected to be the lowest in over 25 years.

Conversely, South Africa is heading toward its best corn crop since 1980/81. But a cool growing season will delay the harvest. South Africa's exports in 1988/89 are projected to more than double to 2 million tons, with additional new-crop corn likely to be exported in 1989/90.

Cotton Intentions Down 12 Percent

With a doubling of the cotton ARP requirements from 12.5 percent to 25 percent (for upland cotton), the prospective planted area for both upland and extra-long staple (ELS) crops in 1989 is down about 12 percent, to only 11 million acres. All major cotton-producing States are likely to have reduced plantings this year.

Yearend U.S. cotton stocks continue to be projected at 8.4 million bales, as 1988/89 production outstrips consumption. Inventories were only 5.8 million bales last year, and 5.0 million in 1986/87.

World cotton production in 1988/89 is estimated at 84.3 million bales, 5 percent above 1987/88. Although world consumption is about unchanged at nearly 83 million bales, higher late-season demand from China increased projected trade somewhat. Competitive prices

Generic Certificate Update

Additional advance deficiency payments of 10 percent will be made to eligible producers of wheat, feed grains, rice, and upland cotton in the form of generic certificates. Under the 1989 farm program signup, which ended April 14, participating producers were authorized to receive the minimum statutory amount of their projected deficiency payment—40 percent for wheat and feed grains, and 30 percent for cotton and rice. The payments totaled an estimated \$3.13 billion and were made in cash.

The additional 10-percent advance deficiency payments raise available payments to 50 percent for wheat and feed grains, and 40 percent for rice and upland cotton. The additional payments total an estimated \$850 million and will be issued in generic certificates sometime after May 15.

Certificate Demand Over the Coming Months

Demand for generic certificates over the coming months is expected to arise from

demand for Commodity Credit Corporation (CCC) stocks and from producers with maturing loans. Certificate demand in the previous 2 years came primarily from Quick-PIK opportunities, which increased loan placements and boosted premiums above par. With market prices for wheat and feed grains currently well above loan rates, Quick-PIK opportunities are not expected to be available to producers.

USDA projections for the 1988/89 corn marketing year suggest that 800-900 million bushels of corn from producer loans and CCC inventory will need to be available to the market to meet projected demand through yearend, and keep carryover free stocks of 200 to 300 million bushels.

Approximately 80-100 million bushels of wheat and sorghum each will need to be made available from producer loans and CCC inventory to meet projected market demand. As regular and Farmer-Owned Reserve (FOR) loans mature, the loan redemption values may exceed market prices, indicating large forfeitures to the CCC. Certificates could be used to minimize forfeitures and allow the market to access stocks at competitive prices.

Certificate Availability as of April 4, 1989

	\$ mil.
Issuances as of February 28:	
Generic	23,480.2
Cotton specific	22,683.1
	797.1
March estimate of EEP and TEA	100.0
Announced 1988-crop payments	125.0
Total issuances	23,705.2
Certificate exchanges:	
Grains and oilseeds	21,583.3
Cash	479.6
As of February 28	454.6
March estimate	25.0
Cotton	1,200-1,500
Total exchanges	23,263-23,563
Availability	150-450

Not all of the yearend reductions in FOR and CCC stocks would have to be made via certificate exchanges. Some maturing FOR loans may be forfeited to the CCC regardless, requiring further reductions in CCC-owned stocks. In addition, some of the projected reduction in CCC-owned wheat and corn will be due to other domestic programs.

Current Availability Below \$500 Million

USDA issued \$23.5 billion in certificates as of February 28, 1989, \$22.7 billion in generic certificates and \$797 million in cotton-specific certificates. Less than \$100 million in certificates may have been issued for the Export Enhancement Program (EEP) and the Targeted Export Assistance Program (TEA) in March. Given \$125 million of March issuances for 1988-crop program payments, issuances through March 1989 could be \$23.7 billion.

Total exchanges for grains and oilseeds were \$21.6 billion through April 4, 1989. Cash exchanges were \$454.6 million through February 28, and are estimated to be about \$480 million through March 1989. Given the current range on cotton exchanges for producer loans with generic certificates, total exchanges by April 4, 1989, were \$23.3-\$23.6 billion. That would leave current availability below \$500 million. [Kenneth Bailey and Joe Glauber (202) 786-1840]

Cumulative Generic Certificate Exchanges as of April 4, 1989

Commodity 1/	Unit	CCC inventory 2/	Producer loans	Total
Food grains				
Wheat				
Volume	(Mil. bu.)	782.4	661.9	1,444.3
Value	(Mil. \$)	2,048.6	1,590.1	3,638.8
Rice				
Volume	(Mil. cwt)	42.9	14.7	57.6
Value	(Mil. \$)	158.2	53.7	211.9
Feed grains				
Corn				
Volume	(Mil. bu.)	1,634.1	7,435.1	9,069.3
Value	(Mil. \$)	3,481.9	12,430.0	15,911.9
Grain sorghum				
Volume	(Mil. bu.)	248.5	482.4	730.9
Value	(Mil. \$)	501.7	809.8	1,311.5
Barley				
Volume	(Mil. bu.)	103.6	193.5	297.1
Value	(Mil. \$)	168.8	253.3	422.1
Cotton				
Volume	(Mil. bales)	.91	6.66	7.56
Rye, oats, soybeans				
Value	(Mil. \$)	36.0	51.2	87.2
Total value 3/	(Mil. \$)	6,395.2	15,188.1	21,583.3

1/ Other program commodities, for which few or no exchanges have been made, include honey, nonfat dry milk, butter, and cheese. 2/ CCC loans as of March 31, 1989. 3/ Does not include values for cotton exchanges.

Source: Agricultural Stabilization and Conservation Service, USDA

enabled foreign suppliers to capture much of the early season demand, drawing foreign stocks to their lowest since 1983/84.

As foreign supplies dwindled, export prices have risen. World prices, represented by the A Index of c.i.f. Northern Europe prices, had risen less than 3 cents per pound from the beginning of the marketing year to March 1. But in March, the A Index rose 6.5 cents to 70 cents per pound. As a result, the U.S. Adjusted World Price now exceeds the loan rate, helping make U.S. exports more competitive and enabling the U.S. to make a larger share of late-season sales.

Soybean Intentions Up 5 Percent

Farmers say they intend to plant 61.7 million acres of soybeans in 1989, 5 percent more than last year. Higher prices during the 1988/89 crop year likely have encouraged increased plantings, especially in the Southeast.

The *Prospective Plantings* report indicates that Corn Belt farmers are likely to plant substantially fewer acres of soybeans on base acreage of program crops than permitted by the Disaster Assistance Act. If intentions are realized, soybean plantings in the Corn Belt will rise about 3 percent. Larger increases are indicated for the Delta (5.7 percent) and the Southeast (20 percent).

Larger South American soybean production will not offset last year's decline in U.S. production, leaving world production in 1988/89 at 93 million tons, 10 percent below 1987/88. Although higher than last year, soybean prices have weakened recently with excellent harvest prospects in Brazil and generally sluggish demand for U.S. exports.

The smaller U.S. crop underlies a nearly 20-percent decline in world soybean trade in 1988/89. Higher prices and poor crushing margins in the European Community also contributed. U.S. exports are forecast at just under 15 million tons, 31 percent below a year earlier.

World exports of soybean meal, however, will be up 4 percent this year to 26 million tons. The increase will come

from South America, where larger soybean production, weak domestic feed demand, and differential export tax structures in Argentina and Brazil favor soybean meal and oil exports over whole beans. Larger purchases by the USSR will account for nearly all of the increased trade in soybean meal.

Apparent U.S. soybean oil use continues weak, adding to stocks and pressuring prices despite an 11-percent decline in production. Consumption in 1988/89 of under 12 billion pounds (about 5.4 million metric tons) is off 8 percent from last year. The season-average price for 1988/89 is expected to be below last year's 22.65 cents. [James Cole (202) 786-1840 and Pete Riley (202) 786-1824]

For further information, contact: Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; James Cole, domestic feed grains; Bob Cummings, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Bob Skinner, domestic cotton; Jim Schaub, domestic peanuts. World information (202) 786-1824; domestic (202) 786-1840.

High-Value Crop Overview

Higher Prices Encourage More Planting in 1989

Farmers said they intend to plant more acreage to processing vegetables, dry beans, tobacco, and sweet potatoes in 1989, probably due to elevated prices this spring that resulted from drought-reduced stocks and strong demand. But higher prices for the major field crops (corn, wheat, soybeans, barley, and oats) will dampen acreage increases among horticultural and specialty crops.

Processors plan to contract for 1.48 million acres of the five major vegetables (snap beans, green peas, sweet corn, tomatoes, and cucumbers for pickles) in 1989, up 10 percent from 1988. Contracted area accounted for 97 percent of planted area in 1988.

Tomato processors indicate that they will contract for 9.58 million tons this year, up 32 percent from 1988. California, the dominant producer with 85 percent of the acreage, expects a 22-percent increase. If realized, this will be the largest tonnage ever in the U.S.

Canned Pea Stocks Drop 62 Percent

Canned green pea stocks on February 1 were down 62 percent from the year before; green beans were down 24 percent, and sweet corn down 14 percent. Last summer's drought reduced vegetable yields in the upper Midwest and lowered the packs of canned peas, green beans, and sweet corn. The upper Midwest is the center of the nation's canning industry for these items. The smaller pack led to below-normal stocks and higher prices during the winter and spring.

The weaker dollar may have contributed to higher prices this spring. A low-valued dollar makes U.S. products cheaper for foreign buyers, and foreign products more expensive for U.S. buyers, thereby fostering exports and restraining imports.

Fueled by strong demand for tomato paste in the food service sector, prices for canned tomatoes and tomato products this winter and spring were almost double those for the winter and spring of 1988. The weak dollar made tomato paste from EC countries relatively more expensive than U.S. paste, thereby boosting demand for domestic tomatoes. Recent strength in the dollar may offset some of the advantage for U.S. paste in the months ahead.

High prices for dry edible beans this spring likely are the reason producers said they intend to plant 1.67 million acres in 1989, up 11 percent from actual plantings in 1988 and 21 percent above March 1988 intentions. Dry bean producers planted an additional 100,000 acres in 1988 after it became apparent that dry weather would lower production and likely result in higher prices.

Prices averaged \$29.70 per cwt for the 1988 dry bean crop, compared with \$16.50 the year before. Dry bean output fell in 1988 because the drought lowered

Planted Acreage for Selected High-Value Crops

Crop	Actual 1988	Intended 1989	Change from 1988
	1,000 acres		Percent
Processing vegetables 1/			
Tomatoes	273.0	323.4	18.4
Green peas	119.1	133.0	11.7
Snap beans	89.4	95.4	6.7
Sweet corn	185.4	194.1	4.7
Cucumbers (processing)	39.8	44.3	11.3
Sweet potatoes	92.6	94.0	1.5
Dry edible beans	1,498.4	1,669.5	11.4
Sugarbeets	1,326.8	1,326.2	0.0
Tobacco			
Flue-cured	366.4	403.0	10.0
Burley	222.9	264.6	18.7
Other types	42.4	45.7	7.8

1/ Contracted area, which accounts for 97 percent of planted area.

The PPI: Handle With Care

The Producer Price Index (PPI), issued monthly by the U.S. Department of Labor, is a widely used gauge of food price trends. But like many economic indicators, it should be interpreted with caution.

The PPI for February, released on March 17, indicated that wholesale prices for finished consumer foods--those ready for sale to food retailers--averaged 1.2 percent higher than in January, after seasonal adjustment.

The sharp increase rekindled inflationary fears, which had begun subsiding after other economic indicators showed a possible slowdown in the general economy. As news of the PPI increase spread, prices of stocks and bonds fell, disrupting financial markets. The news media warned of galloping food price inflation for the second straight month.

There is cause for concern when a major component of a price index rises this much in a single month. However, it is important to be aware of what causes the change. Much of the increase in the February PPI for food was due to a 158-percent jump in the wholesale price of fresh tomatoes. Excluding tomatoes, the increase in food prices likely would have been less than 1.0 percent.

A cold snap in Mexico, a major source of winter fresh vegetables, disrupted U.S. vegetable shipments. Because of strong demand for tomatoes--notably for salad bars in restaurants and supermarkets--any supply disruption can cause wide price swings, particularly at the wholesale level. Although tomato prices don't ordinarily exert a strong influence on the PPI, the sheer size of the price increase had a significant effect in February.

How reliable is a 1-month change in the PPI as an indicator of price trends? Part of the answer lies in how the PPI is sampled. Most wholesale food prices are gathered each month on the Tuesday of the week in which the 13th occurs. Prices that day are compared with prices gathered on the comparable day in the preceding month.

As with tomatoes, prices of other fresh vegetables are sensitive to daily supply disruptions. Any threat to the market pipeline can cause producer prices to vary widely day to day. If the sampled price is unusually low 1 month but temporarily high the next, the indicated price change could be exceptionally large.

Such a change probably does not reflect a developing price trend. The PPI, therefore, becomes more indicative of price trends when averaged quarterly or for longer periods. [Ralph Parlett (202) 786-1870]

yields in North Dakota, Minnesota, and Michigan--all important bean-producing States.

The first forecast of 1989 potato acreage will be released in July when USDA estimates planted acreage of fall potatoes. Fall potatoes accounted for 88 percent of total output in 1988.

Growers likely will increase potato acreage because of high prices this spring. Output in 1988 was the smallest since 1983. Grower prices averaged \$7.17 per cwt in March, up almost 80 percent from a year earlier. As with dry beans, higher prices for competing crops likely will dampen the rise in potato acreage.

Sweet potato growers indicated they will plant 94,000 acres this year, up 2 percent from last year. Grower prices for 1988 sweet potatoes averaged 16 percent higher than the year before. Sweet potato production is centered in North Carolina and Louisiana.

Increased Quotas Spur Tobacco Acreage

Tobacco growers indicate they will boost flue-cured acreage 10 percent and burley acreage 19 percent in 1989, to 403,000 and 264,600 acres. This follows USDA's announcement of larger national marketing quotas for the 1989/90 marketing season; the basic flue-cured quota is up 18 percent and the basic burley quota is up 24 percent.

Growers' marketings are regulated by their effective quotas, which are the basic quota adjusted upward for undermarketings (unused quota from previous years) or downward for overmarketings (sales in excess of the quota during the previous season). Growers may market up to 103 percent of their effective quota. Effective quotas for 1989 are 11 percent higher for flue-cured and about 20 percent higher for burley.

The marketing quotas for flue-cured and burley tobacco, the two most important types, are the sum of: (1) domestic cigarette manufacturers' stated purchase intentions during the 1989 marketing year, (2) average exports for the 3 most recent marketing years, and (3) an adjustment to maintain loan stocks at 15 per-

cent of the basic quota, or a minimum of 100 million pounds of flue-cured and 50 million pounds of burley.

Domestic manufacturers indicated they intend to purchase 23 percent more flue-cured and 17 percent more burley in 1989. Most of the increase is for building stocks and manufacturing cigarettes for export. Increasing cigarette production, declining supplies of leaf, and the good quality of domestic tobacco have boosted demand for U.S. output.

Tobacco quotas were raised because the industry had worked off excess stocks. The stocks rose during the early 1980's because imports rose, exports declined, and domestic manufacturers' purchases fell, reflecting reduced U.S. cigarette consumption as well as relatively inflexible tobacco programs.

Since the mid-1980's, production has been somewhat below disappearance as the program became more market-oriented. Consequently, use of domestic tobacco exceeded production and stocks started to fall toward desired levels.

Sugarbeet Intentions Up 3 Percent

Sugarbeet growers indicate that with higher sugar prices this spring, they will plant almost 3 percent more acres than they planned last year. California's planting intentions are down 9 percent while intentions in Colorado, Montana, Nebraska, and Wyoming are up 7 percent. Red River Valley growers (North Dakota and Minnesota) also plan to expand by 7 percent from last year's intentions.

Actual planted area exceeded growers' March intentions by 36,000 acres in 1988, because growers replanted some beets when dry weather caused poor stands among their first plantings.

Summer drought ravaged much of the 1988 beet crop in the Red River Valley, and disease reduced yields in California. Concern over water supplies may have been a factor in reduced 1989 beet acreage in California, where sugarbeet production requires large amounts of irrigation water.

Sugarbeet prices stem from the returns processors receive for refined sugar, which, in turn, derive from the federally guaranteed loan rate for raw sugar and regional supply and demand. The loan rate was unchanged, but reduced output in 1988 lowered sugarbeet supplies in U.S. markets. Relatively higher prices for competing crops such as vegetables and grains likely moderated growth in planned sugarbeet area this year.

Greenhouse/Nursery Output Shows Rapid Long-Term Growth

The greenhouse/nursery industry, one of the fastest growing agricultural sectors, has expanded at an average annual rate of 10 percent since 1982. The increase is being fueled by a growing population, rising incomes, and perhaps by lifestyles that generate greater demand for purchased ornamental plants and cut flowers.

Greenhouse/nursery sales accounted for 11 percent of all farm crop cash receipts in 1987. Greenhouse/nursery products include ornamental trees and shrubs, bulbs, and floricultural crops; including potted flowering plants, foliage plants, cut decorative greens, bedding plants, and cut flowers.

The quantity and value of floriculture production in 1988 and intended area devoted to these crops for 1989 are reported in *Floriculture Crops*, released on April 17. Cut flowers accounted for 19 percent of reported floricultural sales in 1987. Carnations, chrysanthemums, gladioli, and roses are the most important cut flowers in terms of production area and value. Sales of exotic and specialty items, such as tropical cut flowers, also are rising. [Glenn Zepp (202) 786-1883]

For further information, contact: Ben Huang, fruit; Shannon Hamm, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco; Doyle Johnson, greenhouse/nursery. All are at (202) 786-1886.



Commodity Spotlights

U.S.-Canada Free Trade Agreement Alters Meat Import Shares

Until the U.S.-Canada Free Trade Agreement went into effect on January 1, 1989, U.S. imports of quota meats from all suppliers were subject to a potential import ceiling under the Meat Import Act of 1979. The affected meats include fresh, chilled, or frozen beef, veal, mutton, and goat.

The way import controls are computed remains unchanged, but imports from Canada are no longer included. As a result, other countries that sell meat to the U.S.—notably Australia, New Zealand, and Costa Rica—may be able to increase their sales to the U.S. But with low supplies in the exporting countries and new markets opening in Japan and South Korea, the exporters are not likely to significantly boost sales to the U.S. in the near term.

How the U.S. Meat Import Laws Worked

Prior to the U.S.-Canada Free Trade Agreement, the U.S. import law provided for a basic meat import level of 1,204.6 million pounds (product weight) a year. This base amount was the annual average volume of meat imported during 1968-77. The basic import level is adjusted annually for changes in U.S. production

and to prevent imports from exacerbating price swings related to changes in the U.S. cattle cycle.

The adjustments raise the basic amount of imports allowed when U.S. production declines or when U.S. producers are beginning to expand the cattle herd. Conversely, the adjustments hold down imports when domestic production is rising or the herd is being liquidated. Import controls may be negotiated, usually as voluntary agreements, in years when it appears likely that meat imports will reach 110 percent of the adjusted base quantity.

For 1989, if Canada were included, 110 percent of the adjusted base amount—the trigger level—would have been 1,438 million pounds, down from 1,525 million in 1988.

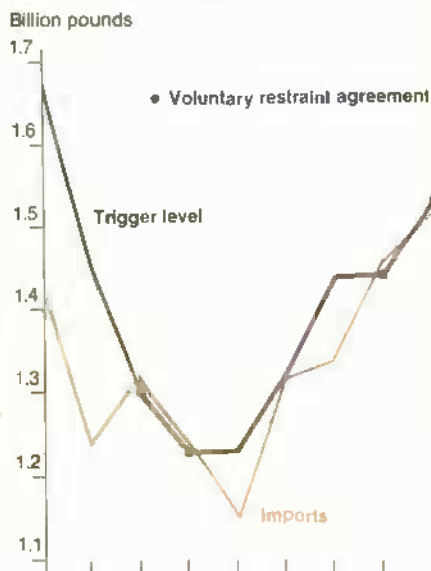
Canada Not Included In Meat Import Ceiling

Now, because of the agreement, Canadian imports are no longer included in the base computation. As a result, the new basic import level is 1,147.6 million pounds. The revised meat import trigger for 1989 is 1,370 million pounds. This may appear to be a cut in the amounts other countries can sell to the U.S., but is not, for several reasons.

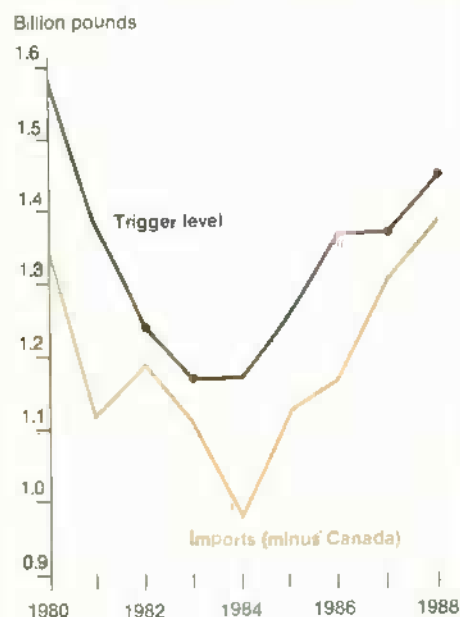
After the base period (1968-77), Canada boosted its share of U.S. beef imports from an average of 4.7 percent a year to a high of 14.5 percent in 1984. As Canada increased its market share, the share that other exporters could sell to the U.S. was reduced. Now, with Canada's old 4.7-percent share excluded from the base calculations and its higher current share not counted against the current limit, competing exporters may face a less restrictive ceiling.

Actual import quotas have not been imposed since the Meat Import Act of 1979 was implemented in 1980. Instead, in the 4 years when it appeared likely that imports would exceed 110 percent of the adjusted base, the U.S. negotiated voluntary restraint agreements with the major exporting countries. In 1988, voluntary restraints were negotiated with New Zealand and Australia.

With Canada, Meat Imports Often Pushed the Ceiling...



...Without Canada, Ceiling Is Less of a Restraint



With the voluntary agreements, the U.S. has, for the most part, avoided having to impose formal import limitations, while supplying countries have been guaranteed the largest shares practical under the law.

If Canada had not been subject to the import limits during 1980-88, the import ceiling probably would not have been a constraint, and the voluntary agreements might not have been necessary. Excluding Canada, U.S. meat imports from the other countries during the 1980's did not come near the new adjusted base

amount. Nonetheless, foreign producers might have produced and shipped more meat than they did if Canada had not been in the picture.

Law Not Likely To Bind Near-Term Shipments

The USDA second-quarter estimate shows that, excluding Canada, about 1,315 million pounds of quota meat will be imported by the U.S. in 1989, 55 million below the new trigger level. If the third- and fourth-quarter estimates are also below the trigger, import restrictions will not be required this year.

But because the Japanese beef and veal markets have opened up and the South Korean market may open soon, foreign suppliers may be unable to meet the new demands and at the same time boost their shipments to the U.S. Herds in the major meat-producing countries are substantially smaller than they were in the mid-1970's. And it will take years before the herds can expand enough to push the new trade limits. [Ron Gustafson (202) 786-1283]

Impacts of Replacing Tropical Oils in Food

Health concerns about "tropical oils"—palm oil, palm kernel oil, and coconut oil—in processed foods are receiving widespread attention. However, any U.S. cuts in tropical oil use would have only a small effect on U.S. and foreign vegetable oil markets. The share of these vegetable oils in total U.S. food use is very small. Moreover, the ability to substitute other vegetable oils in particular food uses is limited by technology, price, and quality standards.

Because of consumers' health concerns, U.S. vegetable oils—soybean, cottonseed, and sunflower—plus imported rapeseed (i.e., canola) oil could make a small gain in market share. The effect on world markets could be much greater, however, if health concerns spread to the European Community (EC). EC imports and food use of tropical oils are much larger than those of the U.S.

Public Concern, Media Attention Date Back to 1986

Today's spotlight on tropical oils, which are high in saturated fats, dates to 1986, when the American Soybean Association (ASA) launched a campaign highlighting the health benefits of soybean oil's relatively low saturated fat content. The National Heart Savers Association subsequently began extensively promoting the use of oils low in saturated fats.

Tropical oil producers vigorously deny adverse health effects; the Malaysian Palm Oil Growers Council has mounted an information campaign and underwritten medical studies to support their position. Tropical oils proponents claim that fear of losing markets motivates the ASA, and point out that most dietary saturated fat comes from dairy products and meat, not tropical oils.

Saturated fats have been linked with high blood cholesterol levels and heart disease. The Surgeon General's *Report on Nutrition and Health*, issued last year, recommends reduced intake of dietary fats, especially saturated fat, as the top priority for dietary change.

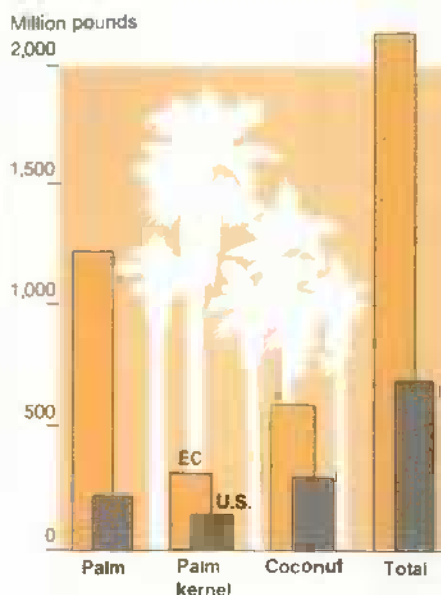
Dietary fat has three components: saturated, polyunsaturated, and mono-unsaturated fatty acids. Saturated fatty acids raise cholesterol levels. The fatty acids in tropical vegetable oils are overwhelmingly saturated. Coconut oil is the most saturated at 92 percent, followed by palm kernel oil at 86 percent, and palm oil at 51 percent.

The saturated fat level of the nontropical vegetable oils ranges from 6 percent for rapeseed oil to 27 percent for cottonseed oil. Fifteen percent of the fatty acids in soybean oil are saturated.

Minor Role for Tropical Oils In the U.S.

The U.S. used about 14.5 billion pounds of fats and oils in edible products in 1987/88. But only 550 million pounds, or 4 percent, were tropical oils. Soybean oil accounts for over 10 billion pounds, and dominates edible uses. Corn oil accounts for 950 million pounds, and cottonseed oil for 800 million. Animal fats (lard and tallow) total about 1.1 billion pounds.

EC Overshadows U.S. in Food Use of Tropical Oils



1984/85 - 1987/88 average.

The major edible uses of fats and oils are salad and cooking oils (6.5 billion pounds), baking and frying fats (5.4 billion pounds), and margarine (1.9 billion pounds).

U.S. use of tropical oils is expected to average 1.84 billion pounds between 1985/86 and 1988/89, but the portion used in edible products is estimated at about 650 million pounds per year, well below the record 1.6 billion in 1975/76. Coconut oil and palm oil each account for about 40 percent of tropical oil use in food, and palm kernel oil the remainder.

Price and the oils' specific properties determine tropical oil use. Baking and frying fats account for about half of edible tropical oil use. Some is used in salad and cooking oils as well as margarine.

But it is in the "other uses" category that these oils find their niche. Coconut and palm kernel oil are used in coffee whiteners, whipped toppings, confectionery products, and cracker spray coatings. These oils are used because they impart to foods a desirable taste, texture, and appearance that other oils and fats do not duplicate.

U.S. Tropical Oils Imported From Asia

All tropical oils used in the U.S. are imported. Coconut oil is expected to account for 57 percent of an estimated 745,000 tons (1.6 billion pounds) of tropical oil imports in 1988/89.

Tropical oil imports have averaged an estimated 840,000 tons (1.85 billion pounds) during 1984/85 to 1988/89, 30 percent above the previous 5-year annual average. Imports of palm kernel oil and palm oil, which have jumped 98 percent and 48 percent, accounted for the growth in tropical oil imports.

Nevertheless, tropical oils' share of total vegetable oil imports is declining. Tropical oils accounted for about 93 percent of all vegetable oil imports in the first half of the 1980's. Rising imports of rapeseed oil since 1985/86 and soybean oil since 1987/88 are expected to reduce tropical oils' share to 79 percent of annual vegetable oil imports in 1984/85-1988/89.

Malaysia produces close to 90 percent of U.S. palm oil imports and about 80 percent of palm kernel oil imports. The Philippines holds a similarly high share for U.S. coconut oil purchases—an average 87 percent over the last 3 years.

Food Producers Are Eliminating Tropical Oils

Several major food processing companies have eliminated tropical oils in all or most of their products, and other firms plan to follow. All cite consumer concern over saturated fats.

Substitution is relatively easy in the major products—baking and frying fats, salad and cooking oils, and margarine—because there are several domestically produced oils with lower saturated fat levels. Because no oil is clearly superior, substitution will be driven by price and technical characteristics. The quantities substituted would be small compared with the amounts of nontropical oils already going into food products.

Replacing tropical oils in specialty applications is more difficult because other oils don't have the same properties. Substitution here will depend on consumer

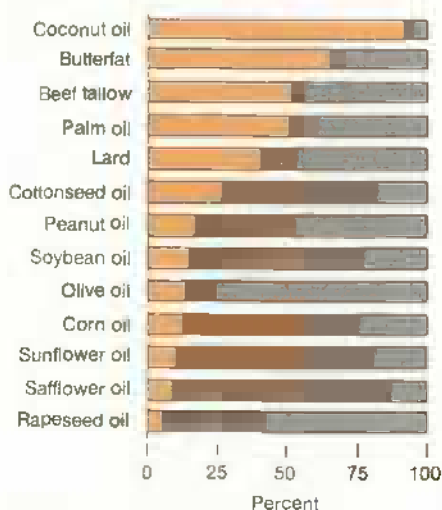
Tropical Oils' Share of U.S. Oil Imports Down Sharply

Year	Palm	Palm kernel	Coconut	Tropical oils' share of total vegetable oil imports
- - - 1,000 metric tons - - -				
				Percent
1979/80-				
1983/84 avg.	130	88	426	93
1984/85	169	138	404	90
1985/86	277	164	552	89
1986/87	215	180	493	83
1987/88	164	210	487	70
1988/89	140	180	425	65
1988/89 forecast.				

Source: Bureau of the Census, USDA/FAS.

Tropical Oils Rate High In Saturated Fats

Dietary Fat



Fatty acid content normalized to 100 percent.

acceptance, as well as on technical feasibility. In the near term, manufacturers may not be able to eliminate tropical oils without noticeably altering the food tastes and consistencies familiar to consumers.

Substituting away from tropical oils will not eliminate saturated fats. Substitute oils also contain saturated fats, and hydrogenation--a process that raises the oil's melting point and improves shelf life--increases saturated fat levels. Nevertheless, hydrogenated soybean oil, for example, is still lower in saturated fats than tropical oils.

As much as half of the tropical oils in U.S. food products could be eliminated.

Based on current consumption, this would be about 325 million pounds. If acceptable substitutes are found for specialty uses, even more coconut and palm kernel oil could be eliminated.

Substitution's Effect Marginal On U.S., World Markets

If edible use of tropical oils were cut 50 percent, the effect on U.S. fats and oils markets would be marginal, because these oils are only a small portion of total use. Substitute oils would capture some of the small market share held by tropical oils.

Prices also would be little affected. Those manufacturers using large quantities of relatively low-priced palm oil would experience the largest impact. Consumers would hardly be affected, because tropical oils account for only a small part of the price of finished food products.

A 50-percent reduction in U.S. food use of tropical oils also would have little effect on U.S. imports and world trade. Using 1987/88 food use as a base and assuming no stock changes, tropical oil imports would decline about 110,000 tons, 13 percent of the 861,000 tons imported in 1987/88. This decline represents 1 percent of world tropical oil imports and 9 percent of U.S. total vegetable oil imports in 1987/88.

Coconut oil's large share of tropical oil imports and its relatively small food use would blunt the trade impact. Most coconut oil is used in nonfood products, such as soap, shampoo, and cosmetics.

The effects on suppliers should likewise be minor. U.S. imports generally account for less than 5 percent of Malaysia's palm oil exports, so reduced demand would have little impact on Malaysia's exports or the world palm oil price. Although the U.S. accounts for about a third of Malaysia's palm kernel oil exports and half of the Philippines' coconut oil shipments, substitution will not significantly displace these oils, because they are used mainly in nonfood products.

EC Substitution Would Broaden Effects

The health debate on tropical oils is currently limited to the U.S. Outside the U.S., tropical oils are consumed primarily in the EC, Asia, and the Soviet Union. The market impact of the health issue would broaden considerably if substitution occurred in the EC, the world's largest importer of tropical oils.

The EC will account for an estimated 14 percent of world tropical oil consumption in 1988/89, versus just 6 percent for the U.S. It is also the world's largest importer, with estimated purchases (excluding intra-EC trade) this year of 1.8 million tons, representing one-fifth of world imports. U.S. imports this year will account for only 9 percent of world imports.

Food use of tropical oils represents a significantly larger share of consumption in the EC than in the U.S. About 57 percent of 1988/89 consumption will be for food use, versus the U.S.'s 25 percent.

A 50-percent reduction in EC food use of tropical oils would have a measurable impact on world tropical oil trade. EC imports would drop about 500,000 tons based on 1988/89 estimated consumption, assuming no stock changes. This is an estimated 6 percent of world tropical oil imports, 28 percent of EC tropical oil imports, and 11 percent of EC total vegetable oil imports in 1988/89.

Because tropical oils account for only 15 percent of EC food use of vegetable oils, and the region is a surplus vegetable oil producer, domestic oils would likely be used in place of tropical oils. Downward pressure on tropical oil prices likely would result, and exporters' earnings

would fall, particularly in the short run. Importers such as India and China should benefit, however, from any price weakening. [Bob Cummings (202) 786-1826 and Jim Schaub (202) 786-1840]

U.S. Apple Producers Under Pressure

Downward pressures on apple prices, as world supplies outstrip demand, are heightening U.S. industry and Government efforts to expand domestic and foreign markets. Adding to the pressure, consumers could have cut demand for apples as health concerns arose over the use of the pesticide Alar. It remains to be seen if Alar use will permanently curtail consumer demand.

Foreign and domestic apple production are both growing rapidly. With domestic demand relatively flat, competition for international markets is intensifying. If demand does not increase, many U.S. producers may be forced to leave the business.

U.S. Supplies Increase As Foreign Markets Tighten

New plantings in the late 1970's and early 1980's are pushing up U.S. apple production. After 5 or 6 years, trees come into production, and after 8 or 9, produce near full capacity. When the new plantings begin bearing at full capacity, output will be comparable to 1987, the largest crop in U.S. history.

U.S. apple production in the 1987/88 marketing year (July/June) totaled about 4.8 million metric tons, up from around 3.6 million the previous 2 years. The record crop stemmed from newly bearing trees, good weather, and high yields in Washington State. The preliminary estimate for 1988/89 is 4.0 million metric tons.

The drop in 1988/89 production is due to several factors. The drought affected the crop in some areas. Also, like most tree crops, apple production is cyclical. After a year of high yields, output is smaller

the following year. Finally, although new trees are coming into production, other orchards are growing older and yielding smaller crops.

Deterioration in the U.S. apple trade balance also contributes to higher domestic supplies and lower prices. U.S. apple imports reached 121,000 metric tons in 1987/88, more than double the volume in 1976/77. Part of the reason was the sharp fall of the Chilean peso against the dollar in the 1980's, which lowered the price of Chilean apples.

U.S. fresh apple exports rose from 120,063 metric tons in 1976/77 to 305,000 in 1980/81. However, they have declined since 1980/81 when the dollar began rising against the currencies of virtually all U.S. apple importers.

Exports for the 1987/88 marketing year, at 293,000 metric tons, were 70 percent higher than the previous year. This was partly due to the low prices induced by the record crop and partly due to the U.S.

U.S. Is the Major Far Eastern Supplier

Supplying region	Calendar year	Demanding region						
		Canada	EC	Hong Kong	Singapore	Taiwan	Thailand	United Kingdom
		Metric tons						
Chile	1982	4,320	114,137	10	18	2,931	0	14,004
	1987	12,774	107,066	10,004	302	12,428	0	15,811
New Zealand	1982	3,016	79,477	2,869	5,259	1,181	9	17,019
	1987	22,199	139,258	3,605	6,191	2,711	89	35,630
South Africa	1982	3,693	171,126	1,035	0	0	0	77,030
	1987	6,413	152,798	3,003	1,010	0	0	80,348
United States	1982	87,118	13,941	19,411	8,136	36,009	1,433	9,912
	1987	97,840	12,801	26,328	7,867	42,701	3,461	10,794

U.S. exports to Canada are as reported by Canada because U.S. export declarations often are not filed when trucks cross the border.

Source: United Nations Trade Statistics, 1982 and 1987.

U.S. Faces Stiff Competition in Apple Markets

Country	Marketing year	Production	Exports	Share of production exported
			Metric tons	Percent
Chile	1976/77	132,500	29,203	22.0
	1988/89	678,000	345,000	50.9
New Zealand	1976/77	145,546	66,632	45.8
	1988/89	385,000	200,000	51.9
South Africa	1976/77	288,561	172,600	59.8
	1988/89	510,000	210,000	41.2
United States	1976/77	3,415,533	108,470	3.2
	1988/89	4,035,880	259,000	6.4

Source: Horticultural Products Review, FAS, USDA.

dollar's decline during 1985-87. The recent softening of trade barriers in several countries will help 1988/89 exports.

Foreign Competition Is Fierce

Several nations, including Chile, New Zealand, and South Africa, have been increasing their apple production and exports. Southern Hemisphere producers export fresh apples when the U.S. is drawing on its cold storage supplies. This gives them a competitive edge, because consumers generally prefer fresh apples. Although Chilean apple exports were hurt by the recent cyanide incident, they are expected to return to normal next year.

The major export markets for U.S. apples are Canada, the European Community (EC), and the Far East. In each, the U.S. faces competition from the three Southern Hemisphere countries.

In response to allegations that the U.S. is dumping apples on its markets, Canada has imposed a "normal value" requirement on U.S. apple imports. It sets a minimum price for Red and Golden Delicious apples. While prices for higher quality apples are likely to exceed the minimum, the lower grades may not. The normal value stipulation acts to restrict entry of lower grade apples into the Canadian market. This will probably dampen U.S. exports.

EC Developments Are Favorable

The EC trades a great amount of apples among its members. France, Italy, and Germany are surplus producers and supply many of the other members. The EC's 1988/89 crop is 20 percent larger than last year. But imported apples are usually of higher quality than the EC-produced varieties.

Also, the EC does not use controlled atmosphere storage, so its stored apples are not of good quality. Thus, there are two apple markets in the EC: one for internally produced apples and another for externally produced apples. A large EC crop does not, therefore, imply that EC imports will decline.

While the United Kingdom is the primary EC market for U.S. apples, inroads were made into the continental EC during the 1987/88 marketing year. This was probably due to the relatively low U.S. price at the time. U.S. apple sales this season are not matching last year's pace.

The EC applied quotas to apple imports in 1987/88, and U.S. sales fell because the quota was filled the day after it was announced. There will be no quotas for the 1988/89 marketing year. Southern Hemisphere producers have agreed to voluntary restraints on exports to the EC. Because the U.S. is a small player in the EC market, U.S. apple exporters do not face voluntary restraints.

Some Markets Open Up

Important Far Eastern markets for U.S. apples include Taiwan, Hong Kong, Singapore, Thailand, the Philippines, and Japan. While Taiwan imposes quotas on apples from other suppliers, U.S. exporters are allowed virtually unlimited access. On January 1, 1989, Thailand lowered its apple tariff, so its imports from the U.S. are expected to grow.

Since the Philippines began granting import licenses for apples last April, U.S. exports to that market have grown and are expected to continue expanding.

There is a plant protection quarantine problem with the Japanese market. The U.S. must be able to prove that the fruit will arrive free of codling moths and fire blight. The problem is close to being resolved, and the Japanese market likely will be opened to U.S. apple exporters soon.

Sweden has agreed to open its market earlier for U.S. apples. Before, imports were allowed only when local supplies were exhausted, usually by mid-December. In 1988/89 the market was required to be open by December 15. In 1989/90, the opening date will be November 15, and in years following the market will be open year round. U.S. exports to Sweden are expected to increase as a result.

Advertising and Promotion Efforts Grow

Because world production and competition for markets are expected to increase, Federal and State Governments, as well as growers, are trying to increase the demand for U.S. apples. The Washington Apple Commission has been running radio and television commercials in 26 markets nationwide. These primarily emphasize the quality of Washington apples.

There is some evidence that the efforts are paying off. Domestic sales rose 26 percent last year. However, lower prices may have been responsible.

It is not clear whether U.S. consumers will demand more apples at higher prices. Unless the advertising and promotion campaigns successfully boost demand, the low prices that are likely to prevail in the future will cause many orchard owners to go out of business in the next 5 to 10 years.

The Targeted Export Assistance Program (TEA) is being used to promote apple exports. For the 1987/88 marketing year, the Apple Commission's international promotion budget received \$1.5 million from the TEA. In 1988/89, funding will slightly exceed \$2 million. Washington State is contributing over \$1 million, so the total budget will exceed \$3 million.

The largest promotional efforts are aimed at the United Kingdom. Approximately \$500,000 is earmarked for this market. Approximately \$300,000 is earmarked for Taiwan. Sweden, Finland, and Norway are targeted for \$300,000 of promotions, as are West Germany and Hong Kong. [Amy Sparks (202) 786-1884]



World Agriculture and Trade

Farm Exports Growing

Higher prices are expected to push up U.S. agricultural exports by \$2.7 billion to \$38 billion in fiscal 1989 (October/September). Export volume is expected to remain close to fiscal 1988's 148 million tons. With world stocks declining, prices for wheat, corn, and soybeans are expected to be the highest since 1985.

U.S. cotton and oilseed exports are expected to decline in value, but grain and feed exports will rise by \$3.6 billion. Favorable exchange rates and relatively strong world economic growth will help push U.S. high-value exports above fiscal 1988's record \$16.4 billion.

The last time U.S. agricultural exports reached \$38 billion was also the last time the U.S. was exporting a drought-reduced crop, fiscal 1984. Like the forecast for this year, 1984's export volume was little changed from a year earlier, but higher prices raised value about \$3 billion.

See tables 29-31 in the back of each issue of *Agricultural Outlook* for detailed agricultural trade data.

U.S. Trade Share To Fall, But Not Much

Drought-reduced crops and higher prices are expected to cut the U.S. share of world agricultural trade volume in 1989, for the first time in 3 years. However, the U.S. trade share likely will be the second highest since 1984, slightly below 1988. The 1989 share is not likely to fall below 25 percent, and will be close to the long-term U.S. average.

During the 1980's, the share has ranged from a high of 32 percent to a low of 20 percent. The U.S. trade share forecasts for 1988/89 were estimated using 1980-88 data on agricultural trade, including intra-European Community trade. USDA forecasts of crop exports in 1988/89 were also used to estimate the likely U.S. trade share.

Changes in U.S. market share will not be spread evenly across commodities, and exports of some commodities are expected to grow. U.S. coarse grain exports are expected to rise in fiscal 1989 and capture much of the increase in world trade. The Soviet Union's coarse grain imports may more than double, following a 15-percent decline in its coarse grain production. World trade in coarse grains is expected to rise 14 million tons, and U.S. export volume could rise 8.5 million tons to 62 million.

Wheat, Coarse Grain Export Values To Rise

While the drought helped reduce U.S. production of coarse grains 31 percent in 1988, some competitors' production also suffered. The drought extended into Canada, reducing Canadian wheat and coarse grain production, while a drought helped drive Argentina's coarse grain crops below 10 million tons for the first time since the early 1970's. With higher prices and larger volume, the value of U.S. coarse grain exports is expected to increase about \$2 billion from fiscal 1988.

Higher export value is also expected for U.S. wheat exports in fiscal 1989. Substantially higher prices probably will more than offset a 1-million-ton decline. Value is expected to be up by \$1.6 billion from last year.

The average price of U.S. wheat exports rose due to less competition, lower U.S. production, and strong demand. Canada and Argentina also have smaller crops this year, which has helped sustain f.o.b. prices at U.S. Gulf ports 37 percent above year-earlier levels.

However, an indirect result of lower production and higher world prices is smaller Export Enhancement Program bonuses. The smaller bonuses have permitted even larger gains in U.S. wheat export prices (i.e., unit values)—they grew 58 percent for all classes and grades during the first 5 months of fiscal 1989. During the same period last year, prices for hard red winter wheat averaged 37 percent higher at the Gulf and 41 percent higher at Kansas City.

Soybean and Cotton Exports Forecast Lower

U.S. soybean exports are expected to decline about 6 million tons this year, while soymeal exports likely will be off 1.7 million tons, and soyoil exports may be down 250,000 tons. Higher prices will not offset declines in volume, so the export value of oilseeds and related products probably will be down by \$900 million to \$6.9 billion.

Low U.S. beginning soybean stocks, record bean production elsewhere, and a drop in world trade have weakened U.S. export prospects. With rising international competition, the U.S. share of world trade in soybeans and related products is expected to be 39 percent, the lowest since at least 1962.

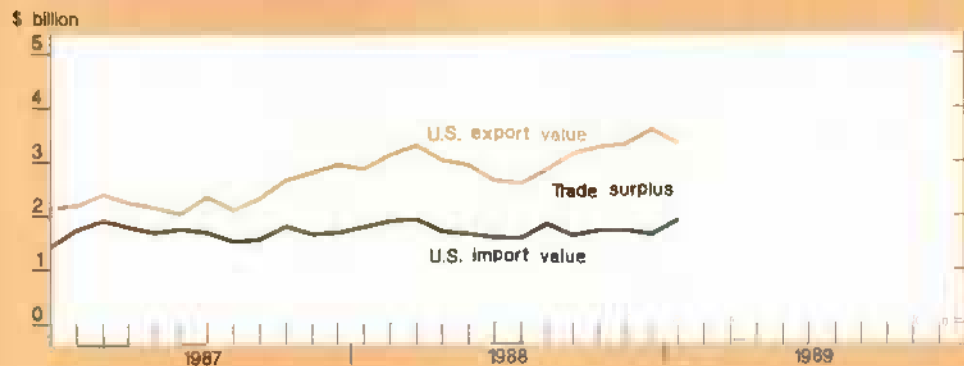
Cotton exports, although largely unaffected by last year's drought, also are expected to fall, following price shifts in the U.S. and overseas that have left U.S. cotton less competitive. This holds despite the recent surge in Chinese purchases of U.S. cotton.

Drought Makes 1989 Exports Similar to 1984

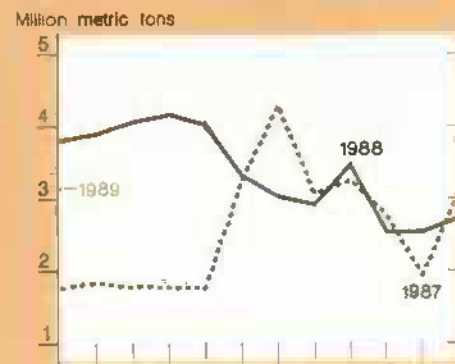
The U.S. export situation this year is expected to be similar to fiscal 1984, when a drought also affected U.S. crop exports. Combined world trade in soybeans and meal fell that year, as expected in fiscal 1989, while a reduced U.S. share of world trade and volume

U.S. Agricultural Trade Indicators

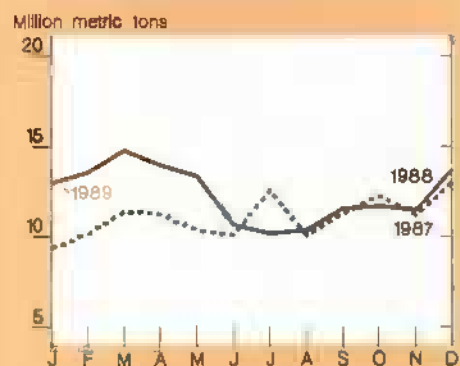
U.S. agricultural trade balance



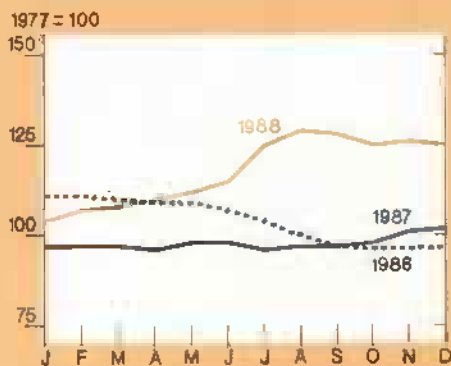
U.S. wheat exports



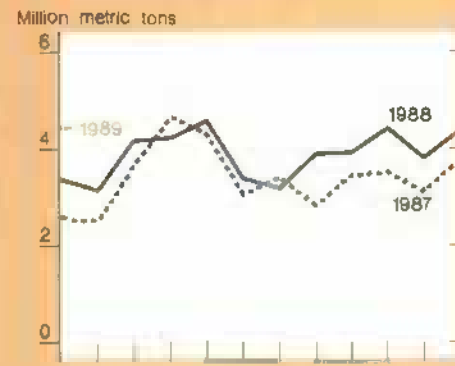
Export volume



Index of export prices



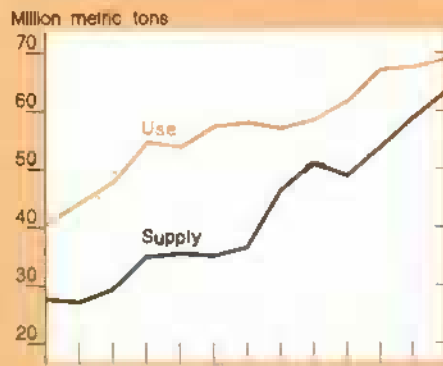
U.S. corn exports



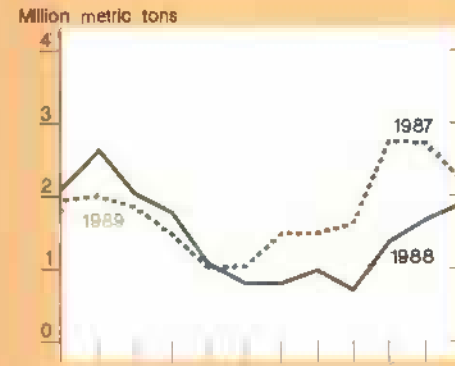
Foreign supply & use of coarse grains



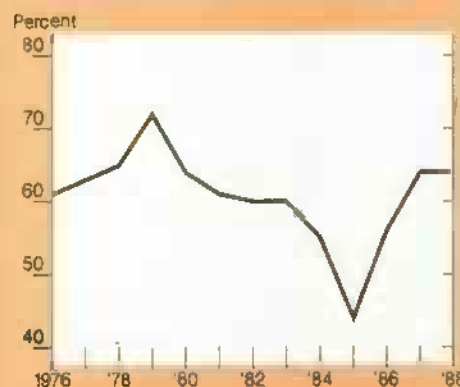
Foreign supply & use of soybeans



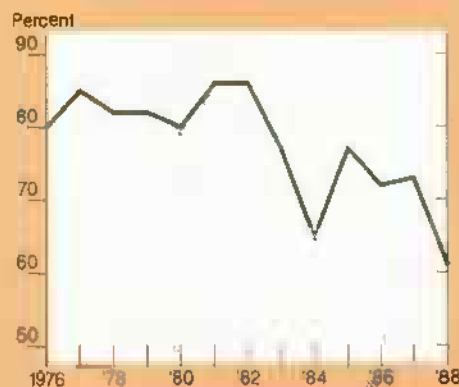
U.S. soybean exports



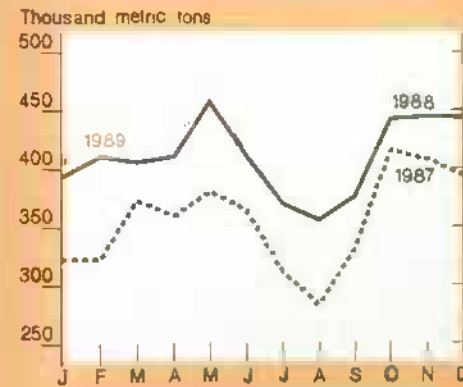
U.S. share of world coarse grains exports¹²



U.S. share of world soybean exports¹²



U.S. fruit & vegetable exports³



¹Excluding intra-EC trade ²October-September years.

³includes fruit juices

GATT Update

The midterm review of progress in the GATT Uruguay Round concluded at the meeting of the Trade Negotiating Committee (TNC) on April 5-7, 1989, held in Geneva, Switzerland. A framework for negotiations was agreed on for each of the four negotiating groups--Agriculture, Safeguards, Textiles and Clothing, and Trade-Related Aspects of Intellectual Property Rights--that remained unresolved following the Montreal TNC meeting (see the March 1989 *Agricultural Outlook*).

The four agreements allowed formal adoption of the midterm review decisions for all 15 negotiating groups. Some of the major elements put "on hold" after the Montreal meeting that will now be implemented are improvements in the GATT dispute settlement process, a multilateral package on tropical products, and a trade policy review mechanism to examine trade policies of GATT members.

Ministers agreed that the long-term objective in the Negotiating Group on Agriculture is "to establish a fair and market-oriented agricultural trading system" with a reform process involving commitments on support and protection

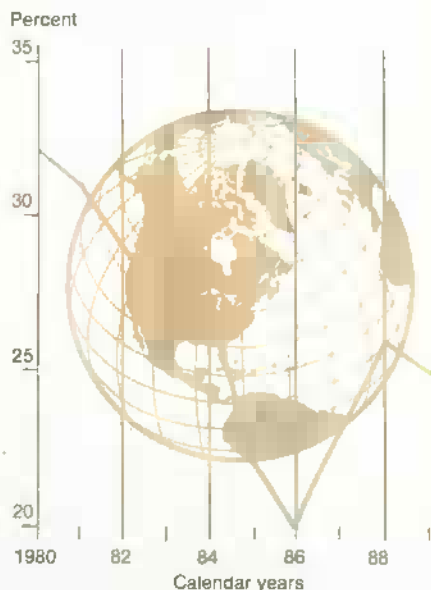
and more effective GATT rules. Participants overcame the impasse reached in Montreal concerning subsidy elimination by agreeing that this objective will provide for:

"substantial progressive reductions in agricultural support and protection sustained over an agreed period of time, resulting in correcting and preventing restrictions and distortions in world agricultural markets."

These reductions will be achieved either by specific policy changes or commitments on an aggregate measurement of support, or by a combination of the two. Credit will be given for measures taken since the September 1986 opening of the Uruguay Round that have contributed positively to the reform process. Proposals for this process, as well as for harmonizing sanitary and food safety regulations along with multilateral dispute settlements concerning them, will be advanced by December 1989.

Negotiators also agreed on several short-term measures that will hold agricultural domestic and export support and protection at or below current levels in 1989. Participants will provide specifics on reductions in support and protection levels intended for 1990 by October 1989. [Ted Wilson (202) 786-1693]

Drought, Higher Prices May Cut U.S. Ag Trade Share



1988 estimated, 1989 forecast.

more than offset price increases. In addition, the volume of U.S. grain exports rose in fiscal 1984, as did world trade in coarse grains.

However, fiscal 1989 U.S. exports of grains, oilseeds, and cotton are forecast to be substantially lower than in fiscal 1984. Bulk-product exports are expected to total only \$21.5 billion, compared with 1984's \$25.6 billion. Smaller shipments and lower prices are expected for nearly all commodities compared to 1984.

High-Value U.S. Ag Exports Will Reach Record Highs

High-value and value-added agricultural exports are expected to reach a record \$16.5 billion. Record tonnage is forecast in fiscal 1989 for both livestock and horticultural products. And prices are higher than in 1984.

Generally, primary-goods prices, such as for unprocessed commodities, lagged processed and other value-added goods prices throughout the 1980's. The trend is expected to continue.

U.S. exports of horticultural products are forecast up \$300 million from fiscal 1988's record \$3.8 billion. Horticultural export sales continue to benefit from heavy promotional activity, strong economic growth in consuming countries, and a favorable exchange rate. Livestock, dairy, and poultry exports are forecast at \$6.2 billion, compared with \$6.1 billion in 1988.

While overall export performance is expected to remain strong for animal products, some bearish factors exist. Hide and skin supplies are falling because of the continuing decline in U.S. cattle slaughter. When combined with an expected drop in demand for leather products, this will probably curb hide and skin exports. Live cattle exports are also expected to slow, but will be offset somewhat by an expected rise in beef exports to meet increased demand from Japan and South Korea.

Exports to Japan To Continue Rising

Increased beef sales are expected to lead to higher U.S. animal product exports to Japan again in fiscal 1989. According to the recent U.S.-Japan beef and citrus agreement, Japan's beef import quota will be enlarged by 60,000 tons per year through March 1991, when the quota will be eliminated. U.S. beef exports to Japan totaled 155,000 tons in fiscal 1988, and accounted for 70 percent of all U.S. beef exports (excluding offals).

Prospects also appear favorable for larger exports of U.S. horticultural products to Japan this year. Eased Japanese trade barriers should boost U.S. orange and orange juice exports to Japan.

In addition, U.S. sales of noncitrus fruit juices and other fruit and vegetable preparations could benefit from the settlement of the GATT-12 dispute. Japan agreed, as part of the settlement, to remove or expand quotas on 10 categories of processed agricultural products (see the November 1988 *Agricultural Outlook*). [Stephen MacDonald (202) 786-1822]



Farm Finance

Uncertain Future For Rural S&L's

Under President Bush's savings and loan (S&L, or thrift) reform plan, about 50 rural thrifts would be taken over by Federal regulators and put up for sale or liquidated. The 900 or so surviving rural S&L's would have to pay more for Federal deposit insurance, and most would also have to raise more capital. So, at least for the near term, farm and rural borrowers may find S&L's less aggressive in making new or speculative loans.

The S&L industry is facing its worst crisis since the Great Depression. The Federal Savings and Loan Insurance Corporation (FSLIC) is insolvent, and does not have the cash to close insolvent S&L's and pay off insured depositors. About a third of all S&L's are headquartered in rural areas, where they are important for rural economic development.

Under the President's plan, the S&L's will share with taxpayers the burden of recapitalizing the FSLIC. Specifically for healthy rural S&L's, the proposed increase in fees for Federal deposit insurance could cut their already low net income by about one-fourth. This estimate is based on computations using the S&L financial statements for year-end 1987.

An already uncertain future for rural S&L's is compounded by higher deposit insurance assessments and the need to raise capital, especially for the 74 percent of rural S&L's that, going into 1988, did not have enough equity to meet the new capital requirements proposed for 1992.

S&L's Active in Rural And Farm Markets

Rural areas have a vital interest in thrift industry reform because it affects the stability of capital markets and thus local economic growth. Rural thrifts account for about one-fourth of all rural bank and thrift assets and deposits, and represent almost one-third of loan volume. The strong presence of thrifts in rural financial markets facilitates capital improvements such as new roads, public works, and housing, and thus local economic growth.

S&L's are not major players in agricultural financial markets, although federally chartered S&L's may allocate up to 10 percent of their loan portfolios to agricultural loans. Moreover, State-chartered (but federally insured) S&L's in some States are allowed to hold more than 10 percent of their portfolios in agricultural loans. Rural S&L's may become more active in farm credit markets after the new secondary market for farm mortgages, Farmer Mac, begins operation late this year.

The farm financial stress of the early and mid-1980's did not affect rural S&L's to the extent that stress affected rural banks. During 1983-87, 25 percent of the 381 failed S&L's were in rural areas, compared with 54 percent of the 586 failed banks.

Thrift insolvencies were geographically more dispersed than bank failures in the early and mid-1980's, yet almost one-third of 1987 thrift failures and 22 percent of 1988 failures were in the 5-State energy belt--Colorado, Kansas, Louisiana, Texas, and Oklahoma. Problems in agriculture, mining, and energy during the 1980's contributed to the demise of a number of thrifts.

Yet over 86 percent of rural S&L's remain sound based on Generally Accepted Accounting Principles (GAAP). The proportion is comparable to that for urban thrifts, indicating that rural S&L's are neither more or less susceptible to insolvency than their urban counterparts.

Bush's Plan Calls For Major Changes

The President's S&L reform package calls for the following major changes:

- Restructuring regulations, including joining the FSLIC to the Federal Deposit Insurance Corporation (FDIC) administratively, and giving general oversight of the Federal Home Loan Bank Board (FHLBB) to the Treasury Department;
- Closing 350 insolvent S&L's by the FDIC and FSLIC;
- Resolving thrift insolvencies through a Resolution Trust Corp. (RTC) financed with a \$50-billion infusion of taxpayer and industry money raised over the next 3 years;
- Using retained earnings of the 12 regional Federal Home Loan Banks (FHLB's), which are owned by the S&L's, to supply more than \$2 billion of the amount needed to buy deep-discounted bonds to ensure repayment of principal on the \$50 billion;
- Raising the basic level of thrift deposit premiums from \$.208 per \$100 of deposits to \$.23 per \$100 by 1991, and then lowering them to \$.18 per \$100 by 1994 to cover interest on the new borrowing.
- Raising current capital requirements and requiring risk-based standards to reduce risk exposure in the industry. By June 1, 1991, thrifts would be required to maintain a ratio of capital to risk-adjusted assets of at least 6 percent, on equal footing with commercial banks. By 1992 the standard would be increased to 8 percent.

Without More Capital, Majority of Rural S&L's Could Not Meet the New Standards 1/

Financial class 2/	Current 3/	1991	1992
	Number of S&L's		
Healthy	793	374	206
Weak	74	449	617
Insolvent	51	95	95

1/ Based on Federal Home Loan Bank Board data for December 1987, adjusted to account for thrift failures in 1988. 2/ Healthy S&L's have capital-asset ratios that equal or exceed the standards using Generally Accepted Accounting Principles (GAAP). Weak S&L's have capital ratios between 0 and the capital standard. Insolvent S&L's have 0 or negative capital. 3/ Using GAAP, the standard is capital equal to or greater than 3 percent of assets. In 1991, the proposed standard is 6 percent; in 1992, 8 percent.

Congress is now working on the plan, and some details could change before the plan is finalized.

The Plan Would Reshape The Industry

Although technically bankrupt, insolvent rural thrifts continue to operate because they are federally insured, with \$5.0 billion in loans and \$7.2 billion in deposits. Closing these institutions should reduce pressures on otherwise healthy S&L's, whose cost of funds were driven upward by insolvent thrifts' high bids for deposits.

Raising capital requirements for thrifts to match commercial banking standards would strengthen the financial integrity of the industry. However, many solvent thrifts are poorly capitalized. Of the 793 rural thrifts able to meet current capital standards, just 47 percent could be able to meet the proposed 1991 capital requirements without having to generate or attract new capital. And only 26 percent of rural thrifts meeting current standards could meet the 1992 requirements without new capital.

Those unable to increase their capital to meet the new standards in 1991 would be required to stop issuing new loans within 2 years. Furthermore, the FDIC would have discretion to close any thrift not meeting the tougher capital standards.

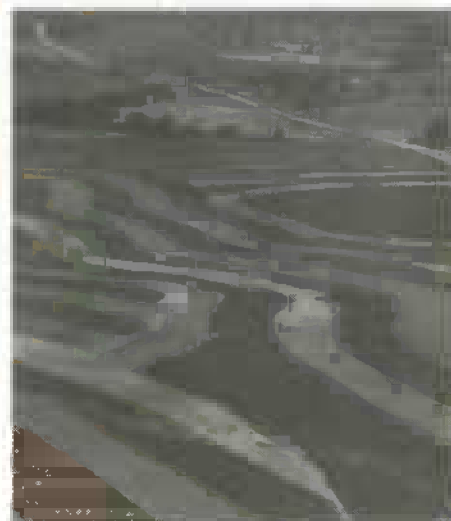
By adopting a capital standard reflecting a thrift's risk profile, the proposal attempts to mitigate the risk-taking behavior characteristic of problem thrifts, and puts considerable pressure on thrifts to improve their capital positions.

At the same time, retained earnings from the regional FHLB's would be used to repay principal on the FSLIC refinancing package, thereby reducing a potential source of revenue for capital building. These earnings are technically owed to thrifts. Consequently, dividends could be scaled back if FHLB-retained earnings were applied to the FSLIC refinancing. Yet using FHLB-retained earnings should not by itself push any rural thrifts into insolvency.

The S&L industry has expressed concerns about the proposed increase in Federal deposit insurance premiums. Scheduled premium changes through 1991 represent a 10.6-percent increase from current levels.

Thrift supporters argue that premiums are already excessive and that any increase would inhibit growth of retained earnings that could sustain more profitable operations. Yet this position is difficult to support when, for example, the additional premium accounts for just 3 percent of solvent rural thrift operating expenses.

For rural communities, there may be lending bottlenecks in the short run as the industry undergoes major restructuring. However, if the long-term result is a healthier industry, the payoff for farmers and rural communities would be greater financial market stability. An anemic industry which frequently favors high-risk, potentially high-return projects would be restructured to favor more solid investments that would stimulate steady local growth. [Clifford Rossi (202) 786-1892]



Resources

Farmland Values Up 6 Percent

U.S. farmland values averaged 6 percent higher than a year earlier in February 1989, the second consecutive annual increase following a 5-year drop that began in 1983. Based on a national survey of farmers and ranchers, the February 1989 average value was \$597 per acre, 27 percent below the record \$823 in 1982. After adjusting for a 5-percent inflation rate in the preceding 12 months, the 1989 per acre real value was slightly above a year ago, but still 47 percent below the inflation-adjusted 1980 record.

Several factors contributed to the recent increase in values. Farmland values generally reflect the expected profits earned from agricultural production over a number of years. Net cash farm income in 1988 was near its 1987 record. While the 1988 drought hit several areas, particularly portions of the Corn Belt, Northern and Southern Plains, and western States, 1988 crop receipts were the highest in 3 years.

Yields in irrigated areas were largely unaffected by the drought. Wheat and soybean yields in many eastern and southern States were above a year earlier. Grain producers, especially those holding reserves from earlier years, benefited from sharply higher market prices. Also, receipts from livestock were record high in 1988.

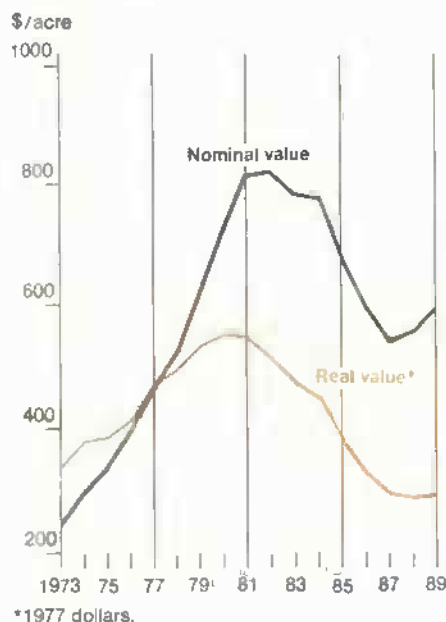
Yet interest rates on farm real estate loans averaged a half percent higher in 1988. Because most of the increase occurred in the last 6 months, its impact, if any, on land values may not be realized until later this year.

Farm real estate debt continued to fall in 1988, dropping 5 percent from the 1987 level and 27 percent from the 1983 peak. The reduction in the farm debt-to-equity ratio, which began in 1986, continued into 1988. The ratio of debt to net cash income also was lower in 1988, continuing the downward trend that began in 1984. So, the overall improved financial condition of producers in 1988 points to a greater capacity to buy land.

Farmland values were higher in all farm production regions, except the Southern Plains. Strong increases continued in the Northeast, where urban pressures helped drive up values an average 13 percent during February 1988-89.

Strong gains also occurred in the Corn Belt (10 percent) and the Northern Plains (9 percent), with significantly higher values in Iowa and Nebraska. Increases in the Lake States (5 percent) and the Southeast (7 percent) were comparable to last year.

U.S. Farmland Values Rise for Second Straight Year



*1977 dollars.

Values in Appalachia averaged 6 percent higher, compared with a 2-percent increase a year earlier. The 3-percent increase in the Delta States was the first since 1981. Higher values in the Pacific region (5 percent) and the Mountain region (1 percent) represented the first increases since 1983 and 1984. The downward movement in Southern Plains' values began in 1986 and continued with a 2-percent decline during the past year, as a 5-percent drop in Texas more than offset a 9-percent gain in Oklahoma.

Cash rents for cropland in 1989 tend to be higher for most States, especially in the Corn Belt and Delta regions. The ratio of cash rents to land values was unchanged to slightly lower for most States, except those in the West, where rents increased proportionately more than cropland values. Cash rents for pasture are near 1988 levels for most States, but significantly higher in the Delta States. [Roger Hexem (202) 786-1422]

Fertilizer Use To Increase

Expanded crop acreage this year, and stable-to-moderately increased application rates for corn, soybeans, and wheat, are expected to increase farmers' fertilizer use 8 percent to 21.0 million nutrient tons.

For the fertilizer year ending June 30, use of nitrogen is forecast at 11.4 million tons, phosphate at 4.4 million, and potash at 5.2 million. During 1987/88, farmers used 10.5 million tons of nitrogen, 4.1 million of phosphate, and 4.9 million of potash. In the future, environmental concerns may have a stronger influence on the demand for fertilizer.

Fertilizer Use Depends on Productivity, Acres Planted

U.S. fertilizer consumption of nitrogen, phosphate, and potash depends on total acreage planted, weather, commodity and fertilizer prices, availability and prices of fertilizer substitutes such as manure and legumes, and crop mix. Planted acreage of the principal crops grew from 298 million in 1964 to a peak of 363 million in 1981, then fell to 308 million acres last year.

Fertilizer consumption followed the pattern of acres planted, increasing from 10.5 million nutrient tons in 1964 to a high of 23.7 million tons in 1981, and declining to 19.5 million last year. Factors such as seed variety, irrigation, timing and placement of fertilizer applications, tillage systems, and yield-increasing pest management practices also encouraged shifts in fertilizer use.

Nitrogen, phosphate, and potash use all increased during 1964-1988, but nitrogen use rose most rapidly. Nitrogen consumption rose from 4.3 million nutrient tons (42 percent of total nutrient consumption) in 1964 to 11.9 million in 1981.

The gain resulted primarily from increased fertilizer applications and improved crop varieties that require more fertilizer. Last year, nitrogen use equaled 10.5 million tons and accounted for 54 percent of total nutrient consumption.

Phosphate use, which advanced 67 percent from 1964 to a peak of 5.6 million tons in 1977, has trended downward since 1979. Phosphate's share of fertilizer use declined from 32 percent in 1964 to 21 percent in 1988. Potash use increased 132 percent from 1964 to 6.3 million tons in 1981, and has declined since then.

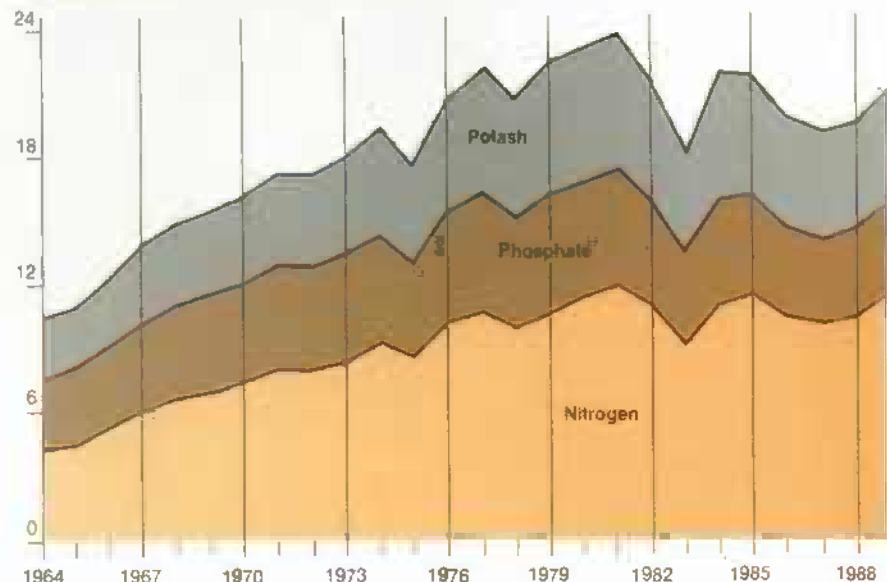
Government programs that affect acreage also affect fertilizer use. For example, the Payment-in-Kind (PIK) program helped cut principal cropland acreage from 358 million acres in 1982 to 309 million in 1983, while fertilizer use fell from 21.4 to 18.1 million nutrient tons. The Conservation Reserve Program (CRP), which began in 1985, also lowered fertilizer use in subsequent years by reducing cropland acreage.

Prices Also Play a Role

The jump in energy prices during 1972-74 and again in 1979-82 increased the cost of producing fertilizer, especially nitrogen, and thereby reduced application rates. Profit-conscious farmers generally apply fertilizer to the point where the cost of an additional unit of fertilizer is equal to the value of the additional amount of crops produced.

Expanded Acreage To Boost U.S. Fertilizer Use

Million metric tons



Years ending June 30. 1989 forecast

Higher commodity prices on the heels of last year's drought are expected to lead farmers to increase planted acres, and raise fertilizer application rates for some crops. However, carryover of phosphorus and potash in the soil from last year's drought-stunted crop may reduce 1989 per acre application rates of these two fertilizers, although total use will rise with increased planted area.

During the late 1970's and early 1980's, when fertilizer use rose along with increased acreage and higher crop prices, the fertilizer demand-supply situation tightened and prices rose. The subsequent drop in crop prices and greater commodity stocks led to fewer planted acres through 1987--primarily through Government programs--and lower fertilizer prices as farmers demanded less fertilizer.

Fertilizer Application Rates Highest for Corn

Corn cropland now accounts for about 44 percent of all fertilizer used, more than any other crop. Fertilizer use on corn rose from an estimated 3.5 million nutrient tons in 1964 to 10.6 million tons in 1985, when corn accounted for over 48 percent of all fertilizer consumed.

Higher application rates, proportionately more corn acres fertilized, and an increase in corn acreage accounted for the rise in use. Average application rates on fertilized corn acreage in 1964 were 58 pounds per acre for nitrogen, 41 pounds for phosphate, and 35 pounds for potash. In 1988, the rates were 137, 63, and 85 pounds per acre.

Today, 97 percent of corn acres receive some fertilizer, compared with 85 percent in 1964. Acreage planted to corn increased about 27 percent from 1964 to 1985, but decreased 19 percent from 1985 to 1988, primarily due to annual acreage set-aside programs and the CRP.

Cotton used an estimated 723,000 nutrient tons of fertilizer, 6.9 percent of the U.S. total, in 1964. In 1988, an estimated 610,000 tons of primary plant nutrients were applied on 16 percent less acreage.

U.S. Fertilizer Application Rates

Year	Corn			Wheat			Soybeans			Cotton		
	N	P205	K20	N	P205	K20	N	P205	K20	N	P205	K20
Pounds per acre												
1964	58	41	35	27	27	19	14	30	37	69	49	37
1965	75	50	48	31	30	35	10	32	39	81	55	57
1966	86	57	57	32	32	37	12	34	41	84	55	58
1967	93	60	60	35	32	39	13	37	42	79	55	55
1968	104	64	65	36	32	36	15	37	45	80	57	58
1969	110	64	67	38	34	39	12	41	48	91	60	57
1970	112	71	72	39	30	36	14	37	51	75	55	57
1971	107	62	64	40	34	36	15	39	48	75	53	58
1972	115	66	69	46	37	38	14	42	51	75	55	61
1973	114	64	71	48	38	36	14	42	55	73	53	62
1974	103	62	73	46	38	37	15	41	55	78	53	55
1975	105	58	67	46	35	35	15	40	53	78	50	55
1976	127	67	78	51	37	37	14	42	60	81	52	56
1977	128	68	82	53	39	41	16	45	60	78	53	52
1978	126	68	80	52	35	34	17	45	62	76	54	54
1979	135	69	84	54	38	43	16	46	67	71	50	44
1980	130	66	86	58	39	40	17	46	70	72	46	46
1981	137	67	86	58	39	47	18	46	76	72	46	46
1982	135	65	86	59	37	41	17	43	68	82	46	55
1983	137	64	85	60	39	48	18	45	70	81	45	52
1984	138	65	87	62	37	46	17	46	72	81	48	53
1985	140	60	84	60	35	36	15	43	72	80	46	52
1986	132	61	80	60	36	44	15	43	71	77	44	50
1987	132	61	85	62	35	43	20	47	75	82	44	45
1988	137	63	85	64	37	52	22	48	79	78	42	39

Fertilizer years ending June 30. N = nitrogen, P205 = phosphate, K20 = potash.

Source: Vroomen, H., Fertilizer and Price Statistics, 1960-88.

Average application rates on cotton in 1964 were 69 pounds per acre for nitrogen, 49 pounds for phosphate, and 37 pounds for potash. In 1988, the rates were 78, 42, and 39 pounds per acre.

While average application rates for nitrogen increased, rates for phosphate increased in the 1960's, remained relatively constant during the 1970's, and declined in the 1980's. Potash rates rose until 1976, slowly declined until 1981, increased in 1982, and have declined since.

Fertilizer nutrient use on soybeans increased 568 percent for nitrogen, 543 percent for phosphate, and 924 percent for potash from 1964 to 1988. In 1979, farmers used 1.7 million tons of primary plant nutrients on soybeans, up from 143,000 in 1964. Since 1979, consumption has decreased, to 1.2 million tons last year.

Changes in fertilizer use on soybeans were due to increased per acre application rates, a higher proportion of acres fertilized (13 percent in 1964 versus 32 percent in 1988), and an 86-percent increase in acreage. In 1964, application rates on soybeans averaged 14 pounds per acre for nitrogen, 30 pounds for phosphate, and 37 pounds for potash. By 1988, the averages were 22, 48, and 79 pounds.

Fertilizer use for wheat climbed from around 708,000 nutrient tons in 1964 to 2.7 million in 1988. While wheat acreage increased 18 percent, application rates more than doubled for nitrogen and potash, and the proportion of wheat acreage fertilized rose from 50 to 83 percent. Average application rates in 1964 were 27 pounds per acre for nitrogen, 27 pounds for phosphate, and 19 pounds for potash. In 1988 the rates were 64, 37, and 52 pounds.

Environmental Concerns A Factor

Increased use of fertilizer, especially nitrogen, has generated environmental concerns about water quality and related health risks. Yet fertilizer demand is likely to remain strong unless economical substitutes or alternative—and profitable—farming practices can be found.

But there are practices—sometimes referred to as best management practices—that modify fertilizer use, leaving yields unchanged, while limiting harm to the environment. For example, doing a soil test each year to determine crop nutrient needs, and limiting fertilizer applications in the fall and winter, could help protect groundwater quality.

Different amounts of nutrients are removed from the soil depending on the crop produced, soil type, texture, moisture content, and other factors. However, less nitrogen is retained than other nutrients, due to denitrification—reduction of nitrates by bacteria, causing nitrogen to escape into the air—and leaching. Properly timed nitrogen applications can produce high crop yields, limit leaching, and help reduce the threat to ground and surface water quality. [Harold H. Taylor (202) 786-1464]

Advance Census Reports Show Irrigation Rebound

Irrigated land in farms rebounded from a Payment-In-Kind (PIK)-induced low of 42 million acres in 1983 to 46 million in 1988, according to annual estimates based on USDA surveys and advance 1987 Census reports.

Irrigated area in 1989 could be the highest since 1982, reflecting strong crop prices, moderate energy prices, and low

annual acreage set-asides. In the East, last year's drought is expected to stimulate some investment in irrigation as a form of insurance. In the West, prospects for available irrigation water have improved over last spring's unusual conditions.

After irrigated acreage peaked in 1978 at 50.3 million, the 1982 Census of Agriculture and the 1984 Farm and Ranch Irrigation Survey (FRIS) suggested that the era of irrigation expansion had ended.

But advance 1987 Census reports show that conclusion may have been premature. The indications of a rebound are based on reports from 35 States that account for about two-thirds of the irrigated acreage. Reports for the remaining major irrigation States may alter the 1987 and 1988 estimates.

Overall Trend Masks Annual Changes

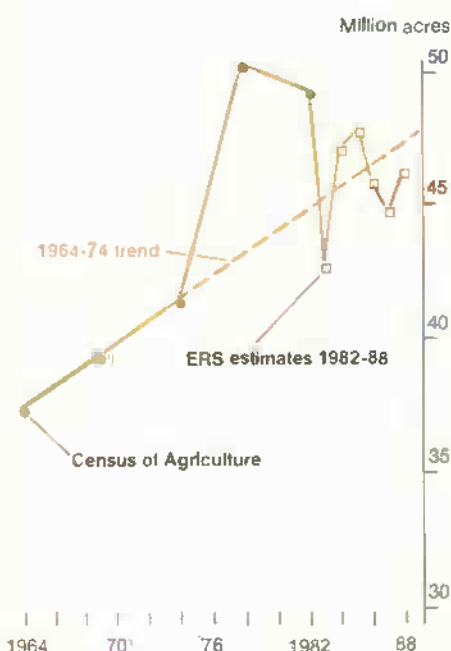
In this century, irrigated area has increased at an average rate of just under half a million acres per year. While the national trend remains a useful indicator of how fast farmers adopt technological improvements, it masks important regional differences. The long-run average also masks year-to-year fluctuations caused by variations in crop prices, energy prices, commodity programs, weather, and water supplies.

Crop Prices Strongly Influence Irrigation

Crop prices and acreage diversion programs have more influence on irrigated area than do weather conditions or energy prices. After expanding about 30 percent per decade during 1900-1930, irrigation development slowed to 4 percent in the 1930's, a period marked by low crop prices. The higher crop prices of the 1940's and 1950's again encouraged irrigation growth.

Growth in irrigated area during 1974-78 also stands out as a substantial deviation from trend; exceptionally favorable crop prices and expanding exports caused irrigated area to grow about 2.3 million acres per year. Slower growth during 1982-84 reflects adjustments to crop surpluses and low prices.

Irrigated Farmland May Be on the Rise



Irrigated Land in Farms, by State

Region	Census 1982	ERS 1/ 1984	Advance Census 1987	Change 2/ 1982-87
	- - - Thousand acres - - -			Percent
Maine	6		6	4
New Hampshire	1		3	126
Vermont	1		2	45
Massachusetts	18		20	14
Rhode Island	2		3	57
Connecticut	7		7	8
New York	52		51	-2
New Jersey	83		na	na
Pennsylvania	18		30	63
Delaware	44		61	38
Maryland	39		51	31
*Northeast	271	225	na	na
Michigan	286		315	10
Wisconsin	259		285	10
Minnesota	315		na	na
*Lake States	861	843	na	na
Ohio	28		32	16
Indiana	132		170	29
Illinois	166		208	25
Iowa	91		92	1
Missouri	406		535	32
*Corn Belt	824	609	1,037	26
North Dakota	163		168	3
South Dakota	376		na	na
Nebraska	6,039		na	na
Kansas	2,675		2,463	-8
*Northern Plains	9,254	9,253	na	na
Virginia	43		79	84
West Virginia	1		3	231
North Carolina	81		na	na
Kentucky	23		38	66
Tennessee	18		na	na
*Appalachian	165	127	na	na
South Carolina	81		na	na
Georgia	575		na	na
Florida	1,585		na	na
Alabama	66		84	27
*Southeast	2,308	1,948	na	na
Mississippi	431		na	na
Arkansas	2,023		2,406	19
Louisiana	695		na	na
*Delta States	3,149	2,870	na	na
Oklahoma	491		na	na
Texas	5,576		na	na
*Southern Plains	6,067	5,697	na	na
Montana	2,023		1,997	-1
Idaho	3,450		3,219	-7
Wyoming	1,565		1,518	-3
Colorado	3,201		3,014	-6
New Mexico	807		718	-11
Arizona	1,098		914	-17
Utah	1,082		1,161	7
Nevada	829		779	-6
*Mountain	14,056	13,645	13,320	-5
Washington	1,638		1,519	-7
Oregon	1,808		1,648	-9
California	8,481		7,596	-10
*Pacific	11,927	11,397	10,763	-10
*Total: 48 States	48,880	46,614	na	na
Alaska	1		na	na
Hawaii	146		na	na
*Revised Pacific	12,074	11,543	na	na
*Total: U.S.	49,027	46,761	na	na
35 States 2/	32,533	31,085	31,195	-4

1/ ERS estimates based on information from the 1982 Census of Agriculture, 1984 Farm and Ranch Irrigation Survey, unpublished estimates from the June Agricultural Survey (NASS), and published estimates of areas of crops that are mostly irrigated. 2/ Percent changes may not match the data reported here due to rounding. na = Not available.

Cropland Diversion Affects Irrigated Area

Almost all of the 1982-84 decline took place in 1983, when irrigated area dropped almost 7 million acres. Record high cropland diversions under the PIK program overwhelmed any increases in irrigation associated with drought in the Corn Belt that year. The 67-million-acre increase in cropland diversion was more than twice that of any other year.

The other drop (about 3 million acres) in annual irrigation totals began in 1986, the year the 1985 Farm Security Act took hold and cropland diversion increased while support levels declined.

Weather and Energy Prices Play a Regional Role

Although year-to-year changes in U.S. irrigated area may be dominated by crop prices and acreage diversion, regional variations also reflect weather conditions and energy prices.

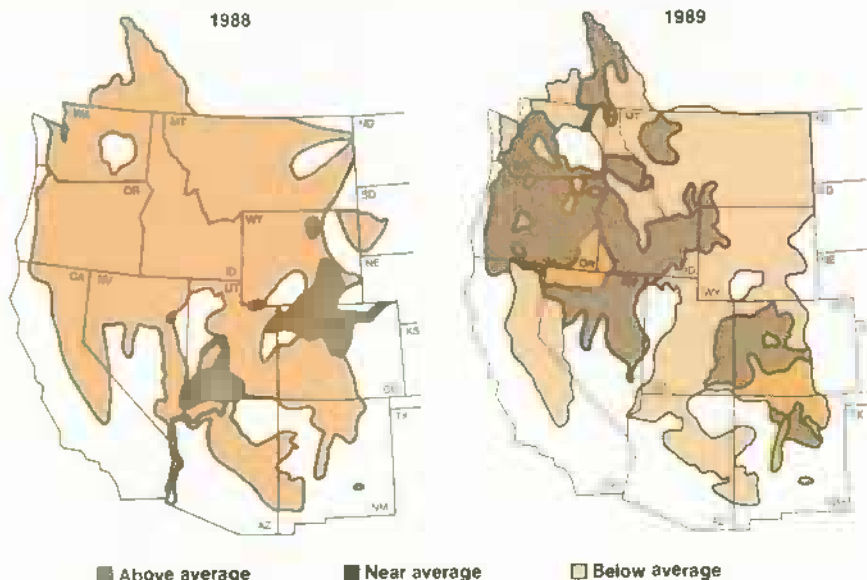
The Pacific and Mountain regions account for over half of U.S. irrigated area. Area irrigated in the West is estimated by the Census at 24.1 million acres in 1987, about 2 million fewer acres than reported in the 1982 Census, but almost 700,000 more than in 1983.

In 1988 the West experienced poor soil moisture prior to planting. Lower-than-normal snowpack led to reduced streamflow during the growing season. Western producers cut back on irrigated area to avoid water stress on remaining crops.

Streamflow prospects for 1989 crops have improved for much of the West and irrigation is expected to recover in most States. Based on the *Prospective Plantings* report, however, irrigated area in California and Colorado may be down from last year. Pockets of continuing drought in the Southwest and generally lower reservoir levels are contributors to a possible decline. Also, California producers reported intentions to plant 280,000 fewer acres to cotton this year, largely reflecting increased acreage-reduction requirements.

The Plains States straddle the demarcation between the arid West and the humid East. In the Northern Plains,

Streamflow Prospects Are Much Improved This Year



Unshaded areas not forecast.

Irrigated Land in Farms Rebounding

Region	1982 1/	1983 2/	1984 2/	1985 2/	1986 2/	1987 3/	1988 2/
Million acres							
Arid West	26.0	23.4	25.0	24.9	24.2	24.1	23.9
Plains States	15.3	11.5	15.0	15.2	14.1	12.6	13.7
Humid East	7.6	7.2	6.6	7.1	7.1	7.7	8.2
Total: U.S. 4/	49.0	42.3	46.8	47.4	45.6	44.5	45.9

1/ 1982 Census of Agriculture. 2/ ERS estimates based on Census reports, 1984 Farm and Ranch Irrigation Survey, 1982-1988 June Agricultural Survey data (unpublished), and published areas of crops that are mostly irrigated. 3/ 1987 Census of Agriculture Advance Reports. 4/ Includes Alaska and Hawaii.

where farmers rely on natural gas as an energy source for irrigation systems, irrigated area growth between 1969 and 1982 was the most rapid in the U.S.

If increasing energy prices were having a slowing effect in the Plains, it was lost in the wave of technological adoption. As in other regions, the commodity programs for 1983 and 1987 were economically attractive, and resulted in substantial cuts in irrigated acreage.

Energy Costs Affect The Southern Plains

Crop prices, diversion requirements, and energy costs help explain annual fluctuations in irrigated area in the Southern Plains, where natural gas fuels about half the irrigation. Intra-State natural gas

prices more than quadrupled between 1970 and 1975. A similar acceleration occurred following deregulation in 1979, when prices tripled within 2 years.

Because much of the irrigation water in the Southern Plains is pumped from deep wells that have declining water tables, energy costs represent a substantial share of production costs. Irrigated area declined in 1974 and 1982, following steep rises in natural gas prices.

Since 1982, natural gas prices have been relatively stable, with slight declines in recent years, while irrigators have actively adopted more efficient irrigation technology to cut pumping costs. Overall, the Plains States may have about 1.5 million fewer irrigated acres than in 1982. But this is a substantial recovery from the 1983 low.

In the Delta States, Arkansas and Louisiana irrigators depend on intra-State natural gas as an energy source. But acreage diverted under the rice program explains most of the variations in irrigated area.

Almost half of all U.S. rice acreage was set aside in 1983, and irrigated land in the Delta dropped by one-fourth. In 1988, area irrigated reached a new high when the ARP dropped from 35 percent to 25 percent, and planted area rose by 300,000 acres over 1987.

Weather Affects Corn Belt And Lake States

Irrigation has more than quadrupled since 1969 in the Corn Belt and Lake States. In these regions, irrigation is supplemental, and there is strong evidence that weather affects irrigated acreage.

In 1983, record acreage diversions under the PIK program and low crop prices led to substantial cuts in irrigated area throughout the U.S. But there was a drought in the Corn Belt and Lake States, and all existing irrigation equipment appears to have been kept in use.

Irrigation is supplemental in the humid East, used when and if needed. In 1988, the drought contributed to an irrigated acreage record. An estimated 8.2 million acres were irrigated in the humid East last year, about 1 million more than during the 1983 drought. [Bill Quinby and John Hosteller (202) 786-1405]



Agricultural Policy

Decoupling: New Interest In an Old Idea

The concept of a crop-specific acreage base, established by the Agriculture and Food Act of 1981, is still being used with acreage reduction programs (ARP's) to determine how much acreage of a program crop is eligible for deficiency payments. Crop-specific acreage bases allow USDA to be more selective in limiting crop production.

The 1985 Food Security Act tightened the rules for preserving bases. Except for special programs, a farmer who plants an alternative crop on an existing base will lose a portion of that base and the benefits that go with it.

Because target prices are higher than market prices, farmers have an incentive to preserve base acreage by planting the program crop. Flexibility to switch among crops is mostly limited to cropland that is not allocated to bases. This has locked in production patterns that favor program crops—grains and cotton—at the expense of nonprogram crops.

The odds are good that any program changes aimed at increasing crop flexibility will reflect something that has been tried in the past. An option that is often mentioned is "decoupling"—or breaking the link between program crop production and payments.

Farm programs during 1971-77 provide examples of how decoupling promoted flexibility in crop selection. A brief review of those programs is presented in this article.

Current Program Encourages Program Crop Production

The national wheat base was set at 91.6 million acres for 1986/87, the corn base at 81.7 million, and the upland cotton base at 15.5 million. Acreage bases were also updated for the three other feed grains and rice.

Enrollment of land in the Conservation Reserve Program (CRP) has led to some reduction in program bases, but the 1988/89 corn base, at 82.9 million acres, has increased since 1986/87. The wheat base was 84.8 million acres for 1988/89, and the cotton base was 14.5 million. The total program crop base accounts for more than three-fourths of the acreage normally devoted to program crops and oilseeds, including soybeans.

The 1985 act sharply lowered loan rates for grains and cotton. Target prices were initially frozen at 1985 levels for 1986 and 1987, and have been allowed to decline gradually since then. The wide gap between target prices and loan rates (and market prices) has encouraged historically high participation rates in ARP's for program crops. High participation rates make the acreage bases unavailable for producing soybeans and other nonprogram crops.

Farmers have to grow the program crops to avoid losing base and future program benefits. This has made producers even more reluctant to grow other crops, because target prices for most program crops are high in relation to market prices. Therefore, even though market prices for soybeans have been high relative to grains in recent years, the farm programs for grains and cotton have discouraged soybean production.

1970 Program Promoted Flexibility in Crop Selection

The Agricultural Act of 1970 introduced the set-aside concept to give farmers freedom in choosing which crops to plant. Once the set-aside requirement was satisfied, there were few restrictions on what a farmer could plant on the

remaining cropland acreage. Earlier programs based on allotments and mandatory controls had restricted farmers' crop selection.

Wheat and Feed Grains Under the 1970 Act

The 1970 act covered crops produced during 1971-73. Set-aside requirements were implemented for each of the 1971-73 programs.

The key elements of the set-aside programs were:

- A domestic allotment for wheat was set at the amount of acreage required to produce enough wheat for domestic food use. The wheat allotment was 19.7 million acres in 1971-72 and 18.7 million in 1973.
- Base acreages for individual feed grains reflected acreage in 1959-60. The corn base was 89 million acres.
- Acreage eligible for payments equaled the domestic allotment for wheat, and was 50 percent of base acreage for feed grains.
- Set-aside was expressed as a percentage of the domestic allotment for wheat, and of the base acreage for feed grains. Set-aside payments were made on normal production from the farm's domestic wheat allotment and on normal production from 50 percent of the farm's feed grain base.
- Conserving base, established under previous legislation, included past acres of fallow, forage, and soil-improving crops.
- To preserve base history, producers had to plant feed grains, wheat, or other substitute crops on at least 50 percent of their feed grain base and 90 percent of their domestic wheat allotment.
- Soybeans could be substituted for feed grains and wheat in 1972 and 1973.

The following example shows how the 1973 program might have worked for a corn-soybean farm:

Assumptions and program variables:

Cropland: 500 acres
Conserving base: 50 acres
Corn base: 200 acres
Corn program normal yield: 90 bushels per acre
Corn set-aside: 25 percent of corn base
Set-aside payment: \$.32 per bushel

Acreage possibilities:

Cropland: 500 acres
Less conserving base: -50 acres
Less required set-aside (.25 x 200 acres): -50 acres
Possible crop plantings: 400 acres

Planting possibilities:

Corn: 0-400 acres
Soybeans: 0-400 acres

Direct payments:

Set-aside payment: \$.32 per bushel
Multiplied by production from 50 percent of corn base (.50 x 200 acres x 90 bushels): 9,000 bushels

Total payment: \$2,880

The example illustrates an important facet of the 1971-77 programs—direct payments did not depend on the acreage actually planted to the program crop. In the example, the payment would have been \$2,880 if no corn were produced, or if all 400 acres of eligible cropland were planted in corn. Today, that feature of the programs would be termed "decoupling."

1973 Act Drew on Basics from 1970

The Agriculture and Consumer Protection Act of 1973 made some changes in how set-aside programs operated, but the basic thrusts of the 1970 act were strengthened.

The 1973 act established the target price and deficiency payment system. Participants in the 1974-77 programs could receive direct payments on normal production from the farm allotment, with virtually no restrictions on acreage planted, except for meeting any announced set-aside requirements.

The conserving base requirement was eliminated, giving farmers even more freedom in planting decisions. Farmers were not required to plant any program crop in order to receive deficiency payments—a feature that had encountered some criticism.

The list of substitute crops was expanded to include virtually every nonconserving crop except those with quotas, such as peanuts and tobacco. But producers had to plant at least 90 percent of their allotments to some crop, such as wheat, feed grains, or substitute crops, in order to preserve their allotment.

Cotton Program Less Flexible

Programs for cotton under the 1970 and 1973 acts were similar to those for feed grains and wheat, with one important exception. Whereas grain programs allowed nearly full substitution of other crops to preserve base or allotment history, cotton producers were required to plant at least 90 percent of the farm's allotment to cotton. Otherwise, a farmer would not receive the full direct payment and could suffer a reduction in the allotment.

Cotton allotments were used to determine set-aside acreage and program payments in the same way as for wheat and feed grains. After meeting any set-aside requirement, farmers received payments based on normal production from the full allotment. The national allotment ranged from 10.0 to 11.5 million acres during 1971-77. There was no upper limit on the acreage of cotton that could be planted.

The cotton programs of 1971-77 may be viewed as a compromise between full decoupling and current programs. The extent to which this type of program affects crop planting decisions depends on the size of the allotment or acreage base, as well as on the level of price and income support. The larger the allotment, other things being equal, the more likely planting inflexibilities will surface.

1977 Act Ended Decoupling

During the mid-1970's, market prices were well above income- and price-support levels, and there were significant changes in geographic production patterns as crop acreage expanded. Set-aside requirements were not implemented during 1974-77. As a result, total acreage planted to major crops rose to 345 million by 1977, 50 million more than in 1970.

The framers of the Food and Agriculture Act of 1977 recognized that basing deficiency payments and production control on historical allotments or bases was no longer adequate in light of the changes in regional planting patterns. Therefore, the "current plantings" concept was introduced.

Under the current plantings concept, set-aside was to be based on a percentage of the current year's acreage planted for harvest. For example, a 10-percent set-aside for wheat meant that a producer planting 100 acres of wheat had to set aside 10 acres of cropland. Wheat deficiency payments were then made on the acres of wheat planted. There was no specific restriction on the acres of wheat that could be planted.

Thus, the 1977 act promoted flexibility in crop plantings, but it also made farm program benefits more important, because farmers had to grow the program crop to collect payments.

This change was, in part, a response to previous criticism that a farmer could receive payments for a crop even if that crop were not grown on the farm. Since passage of the 1977 act, payments have remained linked to production and farm programs have heavily influenced farmers' crop production decisions.
[Sam Evans (202) 786-1840]



Rural Development

Rural Economy Stronger But Still Vulnerable

The economic problems that have plagued rural America during most of the 1980's may have eased. However, preliminary data indicate that in 1988, the nonmetropolitan (nonmetro) unemployment rate remained substantially above the metropolitan (metro) rate, in spite of near-full employment at the national level. A continuing rural dependence on low-growth (and often low-skill) production jobs probably means a long-term disadvantage for rural workers.

Rural job market trends are increasingly important for farmers, as more and more rely on off-farm income to make up for the vicissitudes of farming.

Rural Employment Up Nationwide

Nonmetro employment grew an average 2 percent between 1987 and 1988, near the national rate of 2.2 percent. This is in sharp contrast to 1982-86, when growth averaged 1.1 percent, less than half the national rate. In addition, the nonmetro unemployment rate declined substantially in the past 2 years, another indication of recovery.

The nonmetro job situation improved in all regions and extends even to the most rural counties. All types of nonmetro

Average Unemployment in Metro and Nonmetro Areas 1/

County characteristic	1979	1986	1987	1988 2/
Percent				
U.S. total	5.8	7.0	6.2	5.5
Metro	5.7	6.4	5.7	5.1
Nonmetro	6.1	9.0	7.9	6.9
Region				
Metro				
Northeast	6.5	5.4	4.4	4.0
Midwest	5.5	6.9	6.4	5.6
South	5.0	6.7	6.2	5.6
West	5.8	6.6	5.9	5.2
Nonmetro				
Northeast	7.0	6.6	5.4	4.9
Midwest	5.5	8.3	7.4	6.3
South	6.1	9.8	8.4	7.5
West	7.3	10.1	9.1	8.1
Settlement type, proximity				
Nonmetro				
Some urban, metro adjacent	6.2	8.6	7.5	6.7
Some urban, nonadjacent	6.1	9.4	8.2	7.2
All rural, metro adjacent	6.3	9.0	8.0	7.2
All rural, nonadjacent	5.9	9.3	8.1	7.1
County economy type				
Nonmetro				
Agriculture	5.5	8.7	7.8	6.9
Manufacturing	6.4	8.9	7.5	6.6
Mining	6.1	13.1	11.9	9.9
Retailment	6.6	8.7	7.6	6.9
Other	6.0	9.0	8.0	7.0
Education level				
Nonmetro				
High (top 25 percent of nonmetro counties)	5.7	7.4	6.4	5.6
Middle	6.1	9.1	7.9	7.0
Low (bottom 25 percent)	7.0	11.6	10.0	8.9

1/ Not seasonally adjusted. 2/ Based on preliminary data.

Source: Bureau of Labor Statistics, U.S. Dept. of Labor.

counties except those relatively dependent on mining had substantial job growth between 1987 and 1988. While employment in nonmetro mining counties did not rise, its downward slide has halted.

Manufacturing-based counties did well over the past 2 years, and now have the lowest unemployment rate of any type of nonmetro county. Nonmetro counties with low education levels in 1980 and no job growth through 1986 are also showing some signs of recovery.

Rural Areas Depend On Production Jobs...

Rural areas are especially dependent on production jobs. Both metro and nonmetro jobs are split equally between production (agriculture, mining, manufacturing, and producer services such as banking and legal services) and consumer services (retail, health, education, and other businesses primarily serving households).

While there is little rural-urban variation in the consumer services sector, there is a

substantial difference in the production sector. Rural areas tend to specialize in resource-based industries and in routine manufacturing such as textiles and tires. Urban areas specialize more in complex manufacturing, such as pharmaceuticals and computers.

Within the production sector industries, production jobs are more likely to be in rural areas than are management and research jobs. In 1986, over 60 percent of nonmetro jobs in the sector were production jobs, such as farming and operating industrial equipment. The metro figure was only 35 percent.

...And Production Jobs May Be Rebounding

Nationwide, production jobs declined throughout the early and mid-1980's, particularly in resource industries and routine manufacturing. However, while agricultural employment did not expand last year, mining employment may have stabilized or even grown somewhat.

Average Annual Employment Growth in Metro and Nonmetro Areas

County characteristic	1979-82	1982-86	1986-87	1987-88
Percent				
U.S. total	0.3	2.4	2.6	2.2
Metro	0.4	2.8	2.8	2.3
Nonmetro	-0.2	1.1	1.8	2.0
Region				
Metro				
Northeast	-0.2	2.2	2.1	1.3
Midwest	-1.6	2.4	2.3	2.1
South	1.7	3.2	3.1	2.6
West	1.5	3.3	3.5	3.2
Nonmetro				
Northeast	-0.6	2.6	3.0	2.2
Midwest	-1.3	0.3	1.3	2.1
South	0.3	1.3	1.8	1.7
West	1.1	1.3	1.6	2.3
Settlement type, proximity				
Nonmetro				
Some urban, metro adjacent	-0.4	2.4	2.1	2.0
Some urban, nonadjacent	-0.1	0.7	1.5	1.9
All rural, metro adjacent	0.5	1.6	1.9	2.3
All rural, nonadjacent	0.0	0.1	1.2	1.9
County economy type				
Nonmetro				
Agriculture	-0.1	-0.2	0.9	1.8
Manufacturing	-1.4	1.7	2.1	2.0
Mining	1.3	-3.5	-2.0	0.7
Retirement	1.0	3.4	3.5	3.0
Other	0.3	0.8	1.4	1.6
Education level				
Nonmetro				
High (top 25 percent of nonmetro counties)	0.2	1.9	2.0	2.3
Middle	-0.4	1.1	1.8	2.0
Low (bottom 25 percent)	-0.4	0.1	1.3	1.4

1988 data are preliminary.

Source: Bureau of Labor Statistics, U.S. Dept. of Labor.

Jobs in manufacturing, spurred in part by a cheaper dollar abroad, grew the most since 1984. Manufacturing growth extended to both low- and high-skill production jobs. Thus, one explanation for the recent growth in rural employment may be a nationwide increase in the types of jobs in which rural areas specialize.

A second possible explanation is the labor supply. Sustained economic growth since 1982 appears to have created urban labor shortages, particularly in the metro Northeast, where the unemployment rate is now only 4 percent. Urban labor shortages and rural stagnation during the 1980's increased the non-metro-metro earnings gap.

According to the Commerce Department, earnings per job were 25 percent higher in metro than in nonmetro areas in 1979, but 34 percent higher in 1986. The earnings gap helped create a sizable rural-to-urban migration of young adults in the

mid-1980's. It now may be inducing employers to locate more new plants and jobs in rural areas.

Rural Problems Not Over

Signs of improvement do not necessarily indicate that rural economic problems are over. There are two major reasons for concern. First, in spite of long-term national employment growth, the rural economic upswing has been modest, and rural areas have by no means recovered fully from the recessions of the early 1980's. While metro unemployment was 5.1 percent last year, down from 5.7 percent in 1979, nonmetro unemployment averaged 6.9 percent, still well above 1979's 6.1 percent.

Moreover, nonmetro employment growth has represented more a rehiring of the unemployed than an expansion of the labor force. The nonmetro labor force grew only 0.9 percent in 1988, versus metro growth of 1.7 percent. In spite of sustained economic growth in the U.S., only

rural areas with relatively high education levels have employment conditions comparable to 1979.

A second reason for concern is that production jobs, particularly low-skill jobs, are highly sensitive to national economic conditions. When the economy falters, production workers tend to be laid off first. When technological changes occur, it is the production workers who tend to be replaced by machines. When companies establish plants overseas, it is the production jobs that are exported. And changes affecting local production jobs invariably have consequences for employment in the local consumer services sector.

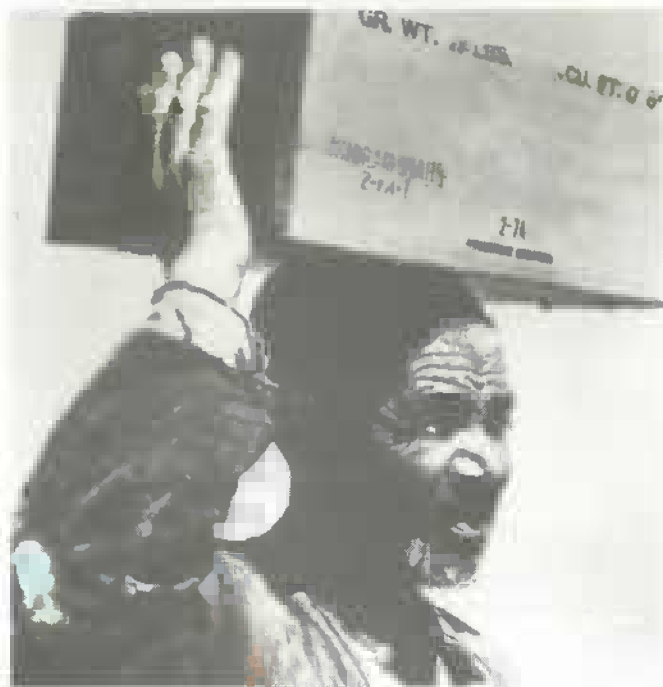
At present, the national economy is operating near its peak, and the price of the dollar favors U.S. exports. The fact that rural employment conditions are still somewhat unfavorable does not bode well for future periods of national economic stress.

Rural Industry Mix Not Changed

During the 1980's, urban areas have improved their industry mix, while rural areas have not. Jobs in complex manufacturing and producer services have expanded in the 1980's, and are projected by the Labor Department to continue growing for the rest of this century. In contrast, jobs in resource industries and routine manufacturing are expected to fall.

By expanding the number of jobs in complex manufacturing and producer services and shedding jobs in routine manufacturing, metro areas increased the ratio of expanding to declining industry earnings between 1980 and 1986. Nonmetro areas showed no improvement. As a result, nonmetro areas have become more disadvantaged in terms of job mix.

It is not yet clear whether the current rural job growth represents an improved mix of industries or an expansion of slow- or no-growth jobs. To the extent that rural areas are unable to attract higher technology jobs, and the rural industry mix remains at a disadvantage to the metro mix, problems faced in future economic downturns will be magnified in rural areas. [David A. McGranahan (202) 786-1540]



Special Article

Food Distribution, Not Production, The Problem Through 2000

Global population growth during the 20th century has been unprecedented. Only a series of equally unprecedented technological breakthroughs has enabled food production to more than keep pace. In recent years, however, growth in food production has slowed, while population has continued to rise. Partly due to government policies and last year's poor weather, world grain stocks are now the lowest in 8 years. So some analysts are once again raising the specter of inadequate food availabilities.

On balance, despite this year's drought-reduced stocks, world food production should be enough to maintain average per capita consumption for the rest of this century. During the first quarter of the 21st century, sustaining growth in food production could become more difficult, particularly if adverse climatic change occurs or environmental problems become more widespread. But the larger challenge will be the distribution of food from surplus to deficit regions.

Globally, People Are Eating More

Since 1950, growth in world food production has increased an average 2.4 percent a year, while population has risen 1.9 percent a year. Consequently, per capita food production climbed an average 0.5 percent a year. Earth's people eat more now than they did in 1950.

Food prices, adjusted for inflation, have trended downward for decades, as increased productivity has more than offset

rising demand for food. During the past four decades, cereal prices, adjusted for inflation, fell an average of 2 percent a year.

Population and Income Growth Spur Food Demand

World population is about 5.2 billion. The population growth rate, which peaked at 2.1 percent a year in the 1960's, declined to 1.7 percent in recent years. Even so, there are 90 million more people to feed and clothe each year, and every year the absolute increase grows larger.

The U.S. Bureau of the Census projects that world population will climb 20 percent to 6.2 billion by the year 2000, and reach 10 billion by about 2040. The annual growth rate is projected to slow to less than 1.6 percent by the year 2000, and to drop to about 1 percent by 2030.

Population growth rates for individual countries vary widely. West Germany's population has been declining since the mid-1970's, and many other European countries have stable populations. High rates of population growth (above 2 percent a year) continue in Africa, Central and South America, the Middle East, and South and Southeast Asia. The disparity is projected to continue.

An increasing population presents a need for additional food. However, the ability of low-income countries to produce or buy food is already limited. Their future food demands will be influenced by economic development and by the growth and distribution of income.

World economic growth will increase demand for food. Rising incomes and the desire to improve diets will boost demand for meat and for the feedstuffs to produce animal products. But rising demand will not be equally distributed.

High-income and most middle-income countries will support increased food consumption, at least into the early 2000's. In contrast, lagging income growth and limited financial resources have caused per capita consumption to decline in Sub-Saharan Africa, Central America, and South Asia in recent years.

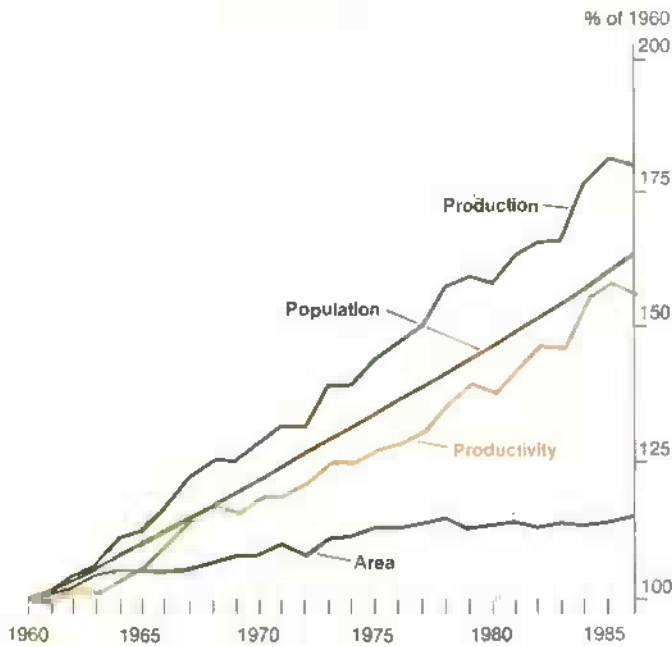
Is Growth in World Food Production Faltering?

Excess food production capacity and large surpluses generally have characterized the 1980's. Although world production has shown little growth since mid-decade, and world stocks this year are low, there is not enough evidence to indicate a permanent shift to slower growth.

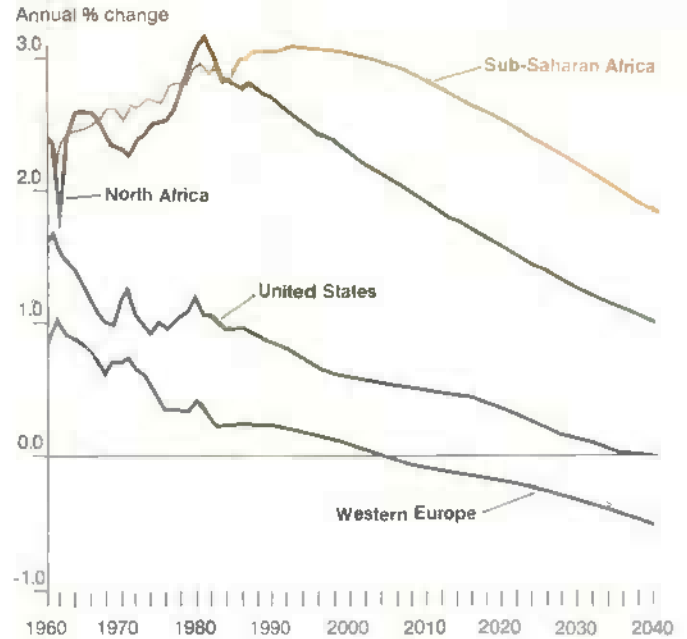
Typically, when food supplies are short, prices rise, causing stocks and consumption to fall. But the higher prices spur farmers to expand capacity and increase production. As production rises, food prices then fall somewhat, restoring consumption growth.

The most recent example was world agriculture's response to the perceived food shortages of the 1970's. The ensuing price rises and changes in government policies led to the

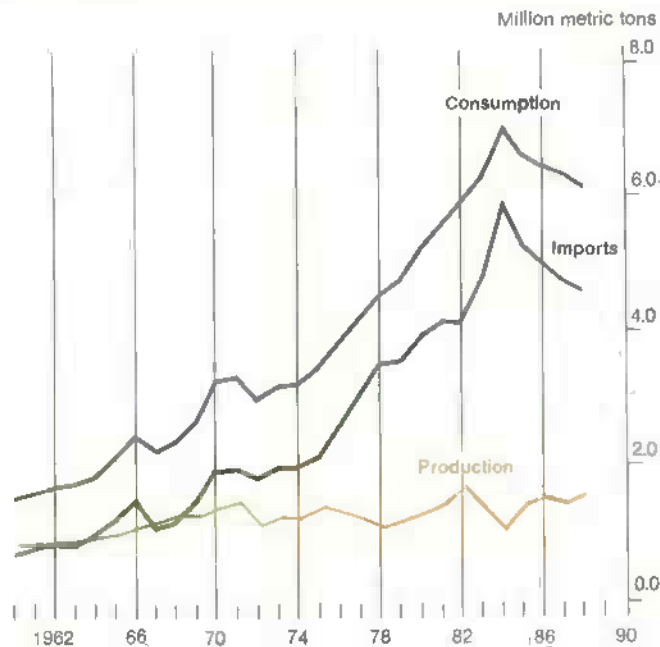
Productivity Is Chief Contributor to Higher World Ag Output



Population Growth: Regional Disparities Will Continue



Sub-Saharan Wheat Deficit Worsened in the 1980's

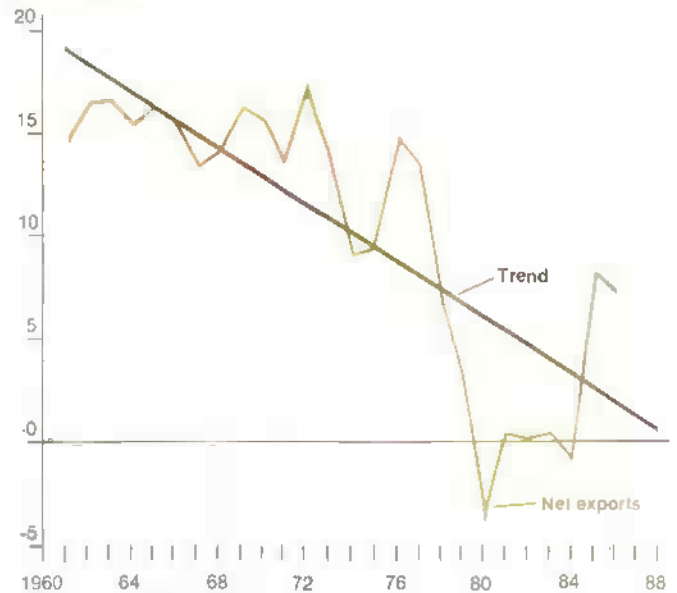


surpluses of the 1980's, and to fierce competition among exporters for world markets. As a result, world prices, adjusted for inflation, dropped sharply to historic lows.

But then, the low world prices led to slower production growth. Poor weather in India, Eastern Europe, and Latin America, as well as U.S. acreage reduction programs, were other short-run factors that cut growth. Once again, the world has reached a point in the cycle where some analysts are concerned about future food availabilities. However, this

Developing Countries' Net Farm Exports Show Long-Term Decline

\$1981-84 billion



time there are several additional factors that may impose longer-term constraints on food production growth, and delay the prospects of returning to burdensome surpluses.

Land for Producing Food Is Limited

Foreign area planted to field crops expanded about 0.8 percent a year during the 1960's. In recent years the rate has fal-

len to less than 0.3 percent, with a significant drop in per capita cropland availability. Part of the slowdown is due to lower real prices.

World crop area set a record in 1987, but it was only slightly above the 1978 record. Population density, poor climates, or poor land quality limit the potential to expand cropland in many countries. Latin America--particularly Argentina, Brazil, Uruguay, and to a lesser extent Chile--and Sudan probably have the greatest potential for expanding cropland. But only the U.S. has significant excess productive capacity available for immediate use.

Much of the land being added to the world's cropland base is only marginally productive. Also, much of the world's agricultural land is used more intensively than in the past. In some places, overly intensive farming practices are causing deforestation, erosion, and desertification. The practices are leading to permanent loss of productive capacity. These problems are more serious in low-income countries with high ratios of population to cropland.

Irrigation may become less important in boosting productivity in the future. Most irrigation projects still to be developed will require costly investments. Some of the investment in irrigation must go for rehabilitation of existing infrastructure in the developing countries. Tube-well irrigation has mined water from underground aquifers and lowered water tables in several parts of the world, while raising the cost of groundwater pumping.

Technology Becoming More Important

Future gains in agricultural output will depend largely on technological advances. Yet growth in crop yields recently

has shown minor signs of slowing down, partly in response to lower world producer prices. But the "green revolution" rice and wheat technologies have already been widely distributed, and the gap between economically feasible yields on research plots and actual farm yields appears to be narrowing.

New yield-enhancing technologies are in the pipeline. However, technological advance requires considerable, sustained financial investment. During times of food shortages and high farm prices, existing technology and previously uneconomic technology are quickly exploited. But the development of new technology generated by basic research does not quickly respond to an increase in world food demand.

Some technological advances in the works include:

- crop varieties with improved drought and disease resistance,
- varieties with shorter growing seasons that will expand crops' geographical range,
- crops able to fix atmospheric nitrogen,
- new methods of plant protection that would reduce toxic residues, and
- animal growth promotants that will increase feeding efficiency and cut production costs.

New production processes are expected to enhance productivity and reduce harmful environmental effects. An example would be irrigation processes that cut evaporation loss, nutrient loss, and groundwater contamination due to

Food Aid Recipient Countries Concentrated In Africa



Uncertainties Surround Future Food Production

Short-term local and regional food shortages (and surpluses) have occurred many times in history. Divergences from long-run trends leading to food shortages invariably caused prices to rise, which spurred production and ultimately raised consumption. During recent periods of surplus and shortage, prognosticators have often overreacted to the short-run disequilibrium. The current situation must be studied in the context of the long-term evolution of world food production and consumption.

If the long-run trend in productivity growth does not continue, or if world population growth rates do not decline as rapidly as projected, world food production could begin to lag behind population growth. If either scenario occurs, food prices will rise and diets will shift toward staples. Because prices of nonstaple foods--meat, for example--will rise more than prices for staples, more grain will be consumed directly, rather than fed to animals to produce meat. Although diets would change, world food supplies would still be adequate.

The resources used to produce half the grain currently fed to livestock in the U.S., Western Europe, and Canada would feed about a half-billion additional people annually if consumed as grains, rather than as meat. If cereal prices were to rise considerably, livestock production would decline significantly. Marginal land in pasture would still allow a sizable output of ruminant livestock products.

If economic development in the low-income countries picks up or if their debt problems are alleviated, world demand could rise more rapidly than production, also leading to higher prices. However, the demand would tend to be for higher quality foods, leading to increased livestock production.

Climatic change or environmental problems could lead to sustained shifts in food production. In the past, most problems affecting world food output were associated with short-term regional weather changes.

leaching. Hydroponic production, which recycles water and residual nutrients, also could be used more.

Improved farm management and production practices could increase food production efficiency in many parts of the world. This can only be accomplished through the long process of educating producers and modifying policies to encourage more efficient farming systems.

Fertilizer will continue to play a major role in productivity growth. Phosphate and potash reserves appear sufficient to cover needs for at least the next decade. Nitrogen production capacity will require expansion by the latter part of the 1990's.

Real energy prices may rise sometime during the next several decades. Higher energy prices increase farm power and fertilizer costs, and hence the cost of food production. International freight rates to transport grain also would rise.

Environmental and Climatic Effects Uncertain

Increased reliance on petroleum energy, fertilizer and pesticides, deep-well irrigation, and marginal land has contributed to environmental problems. Industrial practices that contribute to acid rain and deforestation also hurt agriculture. Future technological advances will have to focus on ways to increase productivity while minimizing harmful effects on the environment.

What a greenhouse effect might do to world agriculture is difficult to evaluate. So far there is no generally accepted global warming scenario with regional details on changes in temperature, precipitation, seasonality, or the effects of increased carbon dioxide on food production.

Is Earth Facing a Food-Population Crisis?

Because future additions to cropland likely will be small, increasing food output will largely depend on raising productivity. During the last three decades, expansion in crop area contributed 0.5 percent to the 2.4-percent annual growth in world food output, and productivity increases accounted for the remainder. Because food production outpaced population growth, average per capita consumption rose.

If productivity continues to climb at long-term trend rates, productivity increases alone--without additional land--will exceed the lower population growth rates that are projected. Even if productivity growth slowly declined from the historical 1.9 percent to 1 percent by the year 2040, world average per capita consumption could still be maintained.

Food Distribution Is Bigger Challenge

Producing enough food for a growing population is not the main challenge facing society in coming decades--unless climatic changes or environmental concerns become larger problems than anticipated. The main challenge will be reconciling the distribution of population and production.

Some countries and regions have food surpluses; others have growing food deficits. The inability of low-income, food-deficit countries to produce enough food or to finance imports--and the willingness of donor countries to supply food aid--will remain major challenges.

The problems of getting food from those who produce it to those who need it likely will intensify. Food deficits in low-income countries have long been a problem, but their severity has increased in Sub-Saharan Africa, Central America, and some other countries during the 1980's.

Over the long run, food production deficits in these areas are expected to grow significantly, along with population. Economic development in food-deficit countries, food aid donors' surpluses, and a willingness to finance food aid will be necessary to sustain current consumption levels in some regions. The 21st-century alternative to economic development and food aid is probably widespread malnutrition, or even starvation.

In the 1960's, the developing countries had a \$15-billion agricultural trade surplus in inflation-adjusted 1985 U.S. dollars. Over the last 15 years, that surplus disappeared. It fell rapidly in the late 1970's and early 1980's as rising per capita income and the availability of international credit boosted food demand.

As income growth and availability of international credit faltered in the mid-1980's, the ability of developing countries to import agricultural products dropped off. Food deficits and declining per capita consumption in low-income countries can lead to domestic social unrest and rising political tensions. Internationally, donor countries with large budget deficits may be reluctant to bear the cost of rising food aid needs. This increases pressure on these countries to improve agricultural efficiency and domestic food production.

Food deficits are not a problem for middle-income industrial countries with adequate export earnings. Taiwan and Korea, for example, have significantly improved their ability to meet food needs even though their per capita food production is falling. However, food deficits will continue to be a problem for low-income countries with low export earnings, large foreign debt, and high population growth rates. [Ron Trostle (202) 786-1820]

Upcoming Economic Reports

Summary Released	Title
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May

11	World Ag. Supply & Demand
12	Livestock & Poultry
18	USSR
19	Agricultural Outlook
22	Feed Livestock & Poultry Update
24	Ag. Income & Finance
25	Wheat Foreign Ag. Trade Update
26	Exports
31	Cotton & Wool

Upcoming Releases from the Agricultural Statistics Board

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the June *Agricultural Outlook* comes off press.

May

2	Egg Products
3	Poultry Slaughter
5	Dairy Products Dairy Products-Annual
8	Celery Milk-Prod., Disp., and Income
9	Vegetables
11	Crop Production
12	Turkey Hatchery Farm Labor
15	Milk Production
16	Potato Stocks
17	Cattle on Feed
18	Sugar Market Statistics
19	Livestock Slaughter
22	Catfish Cold Storage
23	Eggs, Chickens, and Turkeys
26	Peanut Stocks and Processing
31	Agricultural Prices

Statistical Indicators

Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1988				1989				
	I	II	IV	Annual	I F	II F	III F	IV F	Annual F
Prices received by farmers (1977=100)	133	142	144	138	143	141	137	--	140
Livestock & products	148	151	152	150	152	153	151	--	153
Crops	117	133	135	125	134	129	123	--	125
Prices paid by farmers, (1977=100)									
Production items	155	159	162	157	163	--	--	--	168
Commodities & services, interest, taxes, & wages	168	172	173	170	175	--	--	--	180
Cash receipts (\$ bil.) 1/	157	170	137	152	153	155	--	--	151-155
Livestock (\$ bil.)	77	85	81	80	81	80	--	--	81-83
Crops (\$ bil.)	80	85	56	72	72	75	--	--	69-72
Market basket (1982-84=100)									
Retail cost	115	118	118	116	123	--	--	--	--
Farm value	99	104	100	100	107	--	--	--	--
Spread	123	126	128	124	131	--	--	--	--
Farm value/retail cost (%)	30	30	30	30	30	--	--	--	--
Retail prices (1982-84=100)									
Food	117	119	120	118	122	123	--	--	--
At home	115	118	119	117	121	121	--	--	--
Away from home	121	123	123	122	125	127	--	--	--
Agricultural exports (\$ bil.) 2/	8.7	8.7	10.3	35.3	10.6	9.0	8.1	9.5	38.0
Agricultural imports (\$ bil.) 2/	5.0	5.1	5.2	21.0	5.5	5.1	5.2	5.2	21.0
Commercial production									
Red meat (mil. lb.)	9,683	10,139	10,269	39,763	9,608	9,595	9,880	9,908	38,991
Poultry (mil. lb.)	5,209	5,212	4,999	20,406	4,930	5,390	5,525	5,430	21,275
Eggs (mil. doz.)	1,428	1,421	1,446	5,771	1,390	1,385	1,390	1,435	5,600
Milk (bil. lb.)	37.9	36.0	35.4	145.5	36.4	38.7	37.0	36.1	148.2
Consumption, per capita									
Red meat and poultry (lb.)	54.3	55.0	55.7	218.8	52.7	54.1	55.2	56.9	218.9
Corn beginning stocks (mil. bu.) 3/	7,635.2	5,835.5	4,259.1	4,881.7	7,071.6	5,205.0	--	--	4,259.1
Corn use (mil. bu.) 3/	1,801.3	1,576.9	2,109.4	7,698.7	1,868.5	--	--	--	--
Prices 4/									
Choice steers--Omaha (\$/cwt)	72.81	66.92	70.14	69.54	73.67	73.77	68.74	69.75	71.75
Barrows & gilts--7 mths. (\$/cwt)	45.90	44.24	38.66	43.39	40.78	44.48	41.47	39.45	41.45
Broilers--12-city (cts./lb.)	55.6	66.1	57.9	56.3	59.4	58.62	56.62	49.55	56.60
Eggs--NY Gr. A large (cts./doz.)	53.3	72.9	67.3	62.1	79.2	68.72	69.75	72.78	72.76
Milk--all at plant (\$/cwt)	11.43	11.87	13.30	12.21	13.10	11.55	11.50	12.50	12.15
Wheat--Kansas City HRW (\$/bu.)	3.38	3.86	4.11	3.64	--	--	--	--	--
Corn--Chicago (\$/bu.)	2.29	2.84	2.75	2.46	--	--	--	--	--
Soybeans--Chicago (\$/bu.)	7.01	8.38	7.91	7.36	--	--	--	--	--
Cotton--Avg. spot mkt. (cts./lb.)	61.5	58.5	52.3	57.8	--	--	--	--	--
	1981	1982	1983	1984	1985	1986	1987	1988	1989 F
Gross cash income (\$ bil.)	146.0	150.6	150.4	155.2	156.7	152.0	160.5	170	165-169
Gross cash expenses (\$ bil.)	113.2	112.8	113.5	116.6	110.2	100.6	103.3	113	115-119
Net cash income (\$ bil.)	32.8	37.8	36.9	38.7	46.6	51.4	57.1	58	48-52
Net farm income (\$ bil.)	26.9	23.5	12.7	32.3	32.2	37.4	46.3	40	44-48
Farm real estate values (1977=100) 5/	158	157	148	146	128	112	103	106	112

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Dec.-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ Nominal values as of February 1. F = forecast. -- = not available.

U.S. and Foreign Economic Data

Table 2.—U.S. Gross National Product & Related Data

	Annual			1987	1988			
	1986	1987	1988 R	IV	I	II	III	IV R
\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	4,240.3	4,526.7	4,864.3	4,662.8	4,724.5	4,823.8	4,909.0	4,999.7
Personal consumption expenditures	2,807.5	3,012.1	3,227.5	3,076.3	3,128.1	3,194.6	3,261.2	3,326.4
Durable goods	406.5	421.9	451.1	422.0	437.8	449.8	452.9	464.0
Nondurable goods	943.6	997.9	1,046.9	1,012.4	1,016.2	1,036.6	1,060.8	1,073.9
Clothing & shoes	167.0	178.2	186.4	181.2	180.5	183.2	188.4	193.6
Food & beverages	501.0	526.4	551.5	530.9	535.9	546.3	558.9	564.9
Services	1,457.3	1,592.3	1,729.6	1,641.9	1,674.1	1,708.2	1,747.5	1,788.5
Gross private domestic investment	665.9	712.9	766.5	764.9	763.4	758.1	772.5	772.0
Fixed investment	650.4	673.7	718.1	692.9	698.1	714.4	722.8	737.2
Change in business inventories	15.5	39.2	48.4	72.0	65.3	43.7	49.7	34.7
Net exports of goods & services	-104.4	-123.0	-94.6	-125.7	-112.1	-90.4	-80.0	-96.1
Government purchases of goods & services	871.2	924.7	964.9	947.3	945.2	961.6	955.3	997.5
1982 \$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	3,721.7	3,847.0	3,996.1	3,923.0	3,956.1	3,985.2	4,009.4	4,033.4
Personal consumption expenditures	2,455.2	2,521.0	2,592.2	2,531.7	2,559.8	2,579.0	2,603.8	2,626.2
Durable goods	385.0	390.9	409.7	387.6	401.1	410.6	410.4	416.5
Nondurable goods	879.5	890.5	899.6	890.5	892.7	893.6	904.5	907.4
Clothing & shoes	157.6	160.5	161.1	160.3	159.6	156.3	164.2	164.1
Food & beverages	448.0	450.4	453.3	449.2	451.4	453.2	453.8	454.8
Services	1,190.7	1,239.5	1,283.0	1,253.6	1,265.9	1,274.8	1,288.9	1,302.2
Gross private domestic investment	643.5	674.8	721.8	724.7	728.9	715.1	726.1	717.1
Fixed investment	628.1	640.4	679.3	657.6	662.9	679.7	686.6	688.0
Change in business inventories	15.4	34.4	42.5	67.1	66.0	35.3	39.5	29.1
Net exports of goods & services	-137.5	-128.9	-100.2	-126.0	-109.0	-92.6	-93.9	-105.4
Government purchases of goods & services	760.5	780.2	782.3	792.6	776.4	783.8	773.5	795.5
GNP implicit price deflator (% change)	2.7	3.3	3.4	2.4	1.7	5.5	4.7	5.3
Disposable personal income (\$ bil.)	3,019.6	3,209.7	3,471.8	3,315.8	3,375.6	3,421.5	3,507.5	3,582.5
Disposable per. income (1982 \$ bil.)	2,640.9	2,686.3	2,788.3	2,728.9	2,762.3	2,762.2	2,800.4	2,828.4
Per capita disposable per. income (\$)	12,496	13,157	14,103	13,543	13,760	13,919	14,231	14,497
Per capita dis. per. income (1982 \$)	10,929	11,012	11,326	11,145	11,260	11,237	11,362	11,445
U.S. population, total, incl. military abroad (mil.)	241.6	243.9	246.3	244.8	245.3	245.8	246.5	247.1
Civilian population (mil.)	239.4	241.7	244.1	242.6	243.1	243.6	244.2	244.9
	Annual			1988			1989	
	1986	1987	1988	Feb	Nov	Dec	Jan	Feb P
Monthly data seasonally adjusted								
Industrial production (1977=100)	125.1	129.8	137.2	134.4	139.9	140.5	141.1	141.1
Leading economic indicators (1982=100)	132.1	139.6	142.5	140.3	143.9	144.7	145.7	145.2
Civilian employment (mil. persons)	109.6	112.4	115.0	114.3	115.9	116.0	116.7	116.9
Civilian unemployment rate (%)	7.0	6.2	5.5	5.7	5.4	5.3	5.4	5.1
Personal income (\$ bil. annual rate)	3,531.1	3,780.0	4,062.1	3,946.7	4,165.2	4,200.8	4,272.9	4,315.3
Money stock-M2 (daily avg.) (\$ bil.) 1/	2,807.7	2,909.5	3,069.4	2,950.8	3,059.2	3,069.4	3,066.1	3,070.4
Three-month Treasury bill rate (%)	5.98	5.82	6.69	5.69	7.68	8.09	8.29	8.48
AAA corporate bond yield (Moody's) (%)	9.02	9.38	9.71	9.40	9.45	9.57	9.62	9.63
Housing starts (1,000) 2/	1,805	1,621	1,488	1,511	1,567	1,577	1,690	1,498
Auto sales at retail, total (mil.)	11.4	10.3	10.6	11.1	10.2	11.5	9.9	9.9
Business inventory/sales ratio	1.55	1.50	1.51	1.52	1.50	1.49	1.49	--
Sales of all retail stores (\$ bil.)	121.2	125.5	134.4	128.8	138.3	137.9	138.8 P	138.2
Nondurable goods stores (\$ bil.)	73.9	76.9	83.6	80.6	86.0	85.2	86.4 P	86.5
Food stores (\$ bil.)	24.6	25.3	27.6	26.6	28.4	27.9	28.7 P	28.7
Eating & drinking places (\$ bil.)	12.1	12.7	13.1	12.6	13.7	13.7	13.7 P	13.7
Apparel & accessory stores (\$ bil.)	6.7	7.1	7.0	6.6	7.2	7.2	7.4 P	7.4

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. -- = not available.

Information contact: James Malley (202) 786-1782.

Table 3.—Foreign Economic Growth, Inflation, & Export Earnings

	Average 1975-79	1980	1981	1982	1983	1984	1985	1986	1987	1988 P	1989 F	1990 F
Annual percent change												
Total foreign												
Real GNP	3.7	2.6	1.6	1.7	2.0	3.2	3.0	2.8	3.0	3.7	2.9	3.3
CPI	14.0	16.9	15.6	14.4	18.4	22.5	21.6	11.5	16.2	32.0	46.6	62.9
Export earnings	14.6	22.2	-2.7	-7.0	-2.6	5.7	1.7	11.2	18.7	15.9	8.0	6.2
Developed less U.S.												
Real GNP	3.1	2.4	1.4	1.1	1.9	3.4	3.3	2.4	3.1	3.9	3.1	2.8
CPI	9.4	10.9	9.6	8.0	6.0	5.1	4.7	2.8	2.6	2.9	3.5	2.9
Export earnings	14.9	17.0	-3.3	-4.3	-0.5	6.3	4.6	19.4	17.5	8.2	11.0	9.1
Centrally planned												
Real GNP	3.5	1.5	2.1	2.7	3.4	3.7	2.9	3.9	2.8	3.8	3.4	3.9
Export earnings	16.1	16.5	3.4	6.0	8.2	1.5	-5.1	7.3	6.7	6.5	6.9	6.9
Latin America												
Real GNP	5.1	5.3	0.7	-0.5	-2.7	3.3	3.7	4.1	2.6	-0.1	0.1	3.8
CPI	53.7	61.3	64.9	72.6	126.2	174.1	179.4	86.1	136.8	297.8	449.1	631.3
Export earnings	12.8	30.1	5.3	-10.1	-0.8	6.7	-7.3	-14.2	8.8	21.4	1.4	1.0
Africa & Middle East												
Real GNP	6.4	1.3	0.0	1.4	0.1	1.1	0.0	-1.2	1.8	3.2	0.9	3.5
CPI	16.4	24.6	17.3	12.9	16.7	19.4	11.2	11.7	13.6	17.7	18.0	15.4
Export earnings	13.2	37.9	-9.2	-19.7	-17.5	-6.1	-6.2	-19.0	23.4	3.9	4.3	4.8
Asia												
Real GNP	6.8	6.3	6.6	3.6	6.6	5.4	4.0	5.8	5.9	8.1	5.7	5.3
CPI	8.4	16.4	14.1	7.3	7.7	8.5	5.2	4.5	5.4	7.1	7.4	7.6
Export earnings	18.6	27.8	6.8	-0.3	3.4	13.1	-0.8	6.0	28.1	24.7	14.3	9.5

P = preliminary. F = forecast.

Information contact: Timothy Baxter (202) 786-1706.

Farm Prices

Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average

	Annual			1988				1989		
	1986	1987	1988 P	Mar	Oct	Nov	Dec	Jan	Feb R	Mar P
1977=100										
Prices received										
All farm products	123	127	138	130	143	144	145	149	148	149
All farm products	107	106	125	111	133	136	136	140	138	137
Food grains	109	103	138	119	154	156	157	160	161	165
Feed grains & hay	98	85	120	98	136	133	134	137	137	138
Feed grains	96	81	117	94	133	130	130	133	132	133
Cotton	91	98	95	96	90	93	91	89	88	92
Tobacco	138	129	132	126	143	145	145	145	143	143
Oil-bearing crops	77	79	107	90	114	112	113	116	112	114
Fruit, all	170	182	181	163	189	194	192	177	176	159
Fresh market 1/	178	193	194	175	204	208	207	190	188	167
Commercial vegetables	130	144	142	142	129	146	146	179	167	150
Fresh market	123	147	137	138	123	144	147	185	163	149
Potatoes & dry beans	114	126	124	101	126	154	158	163	171	188
Livestock & products	138	146	150	148	152	151	154	158	158	160
Meat animals	145	163	168	171	165	163	166	174	176	175
Dairy products	129	129	126	123	134	138	139	138	135	132
Poultry & eggs	128	107	118	101	132	129	126	129	128	150
Prices paid										
Commodities & services,										
interest, taxes, & wage rates	159	161	170	--	173	--	--	175	--	--
Production items	147	147	157	--	162	--	--	163	--	--
Feed	108	103	128	--	141	--	--	141	--	--
Feeder livestock	153	179	191	--	196	--	--	202	--	--
Seed	148	148	150	--	150	--	--	150	--	--
Fertilizer	124	118	130	--	134	--	--	134	--	--
Agricultural chemicals	127	124	126	--	128	--	--	128	--	--
Fuels & energy	162	161	166	--	165	--	--	166	--	--
Farm & motor supplies	144	144	148	--	152	--	--	153	--	--
Autos & trucks	198	208	215	--	215	--	--	216	--	--
Tractors & self-propelled machinery	174	174	181	--	188	--	--	188	--	--
Other machinery	182	185	198	--	203	--	--	203	--	--
Building & fencing	136	137	138	--	139	--	--	139	--	--
Farm services & cash rent	145	146	147	--	147	--	--	151	--	--
Interest payable per acre on farm real estate debt	211	190	186	--	186	--	--	190	--	--
Taxes payable per acre on farm real estate	138	139	142	--	142	--	--	144	--	--
Wage rates (seasonally adjusted)	160	166	172	--	171	--	--	171	--	--
Production items, interest, taxes, & wage rates	150	151	161	--	163	--	--	165	--	--
Ratio, prices received to prices paid (X)2/	77	79	81	79	83	83	84	85	85	85
Prices received (1910-14=100)	561	578	630	593	654	657	663	682	677	681
Prices paid, etc. (parity index) (1910-14=100)	1,093	1,110	1,167	--	1,193	--	--	1,202	--	--
Parity ratio (1910-14=100) (X)2/	51	52	54	--	55	55	56	56	--	--

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio derived using the most recent prices paid index. Prices paid data are quarterly and will be published in January, April, July, and October. P = preliminary. R = revised. -- = not available.

Information contact: National Agricultural Statistics Service (202) 447-5446.

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1988				1989		
	1986	1987	1988 P	Mar	Oct	Nov	Dec	Jan	Feb R	Mar P
Crops										
All wheat (\$/bu.)	2.71	2.55	3.33	2.74	3.84	3.88	3.94	4.01	4.03	4.16
Rice, rough (\$/cwt)	5.04	4.59	7.79	9.22	6.75	6.72	6.60	6.47	6.59	6.46
Corn (\$/bu.)	1.96	1.56	2.27	1.86	2.58	2.51	2.53	2.60	2.58	2.61
Sorghum (\$/cwt)	3.11	2.56	3.66	2.92	4.17	3.98	3.99	4.09	4.05	4.12
All hay, baled (\$/ton)	61.60	62.40	78.30	67.20	86.80	87.50	89.90	91.20	93.70	98.10
Soybeans (\$/bu.)	5.00	5.08	7.21	6.05	7.53	7.43	7.53	7.69	7.41	7.57
Cotton, upland (cts./lb.)	54.8	59.6	57.2	57.9	53.9	56.7	55.3	53.9	52.9	55.5
Potatoes (\$/cwt)	5.03	4.35	5.49	4.01	4.50	5.74	5.86	6.13	6.42	7.17
Lettuce (\$/cwt)	11.90	14.70	15.20	14.00	11.40	12.60	19.00	18.50	12.60	15.20
Tomatoes (\$/cwt)	25.10	26.00	26.80	28.60	21.70	40.60	19.90	43.40	45.20	28.70
Onions (\$/cwt)	10.90	12.50	9.99	15.00	9.02	9.37	14.00	12.30	10.80	9.77
Dry edible beans (\$/cwt)	19.10	17.67	22.38	15.40	29.00	29.70	30.30	29.60	31.30	32.80
Apples for fresh use (cts./lb.)	19.8	17.6	16.7	12.6	20.8	18.9	17.2	17.9	18.1	16.1
Pears for fresh use (\$/ton)	369.00	227.00	347.00	227.00	406.00	373.00	299.00	286.00	292.00	328.00
Oranges, all uses (\$/box) 2/	4.27	5.03	6.56	6.24	5.48	5.82	6.50	6.20	6.21	5.27
Grapefruit, all uses (\$/box) 2/	4.29	4.96	5.39	5.02	7.57	4.77	4.71	3.72	3.34	3.36
Livestock										
Beef cattle (\$/cwt)	52.80	61.40	66.80	68.30	67.10	66.70	67.20	70.60	71.50	71.20
Calves (\$/cwt)	60.90	78.10	89.80	93.50	87.80	87.80	88.60	92.80	95.90	96.40
Hogs (\$/cwt)	50.10	50.80	42.50	42.20	38.70	36.20	39.70	40.90	40.40	39.80
Lambs (\$/cwt)	69.10	77.90	69.50	80.20	66.20	66.30	68.60	67.40	68.40	72.60
All milk, sold to plants (\$/cwt)	12.50	12.50	12.20	11.90	13.00	13.40	13.50	13.40	13.10	12.80
Milk, manuf. grade (\$/cwt)	11.46	11.37	11.21	10.70	12.30	12.50	12.60	12.20	11.60	11.40
Broilers (cts./lb.)	34.5	28.8	34.0	27.5	37.5	35.0	35.5	35.3	35.2	38.7
Eggs (cts./doz.) 3/	61.2	53.1	53.2	50.8	58.7	59.4	59.7	63.9	62.1	80.1
Turkeys (cts./lb.)	44.4	34.3	36.5	28.2	47.8	47.6	37.6	35.4	38.3	40.0
Wool (cts./lb.) 4/	64.3	87.1	138.0	140.0	123.0	119.0	116.0	107.0	123.0	130.0

1/ Calendar year averages, except for potatoes, dry edible beans, apples, oranges, & grapefruit, which are crop years.
 2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail.
 4/ Average local market price, excluding incentive payments. P = preliminary. R = revised.

Information contact: National Agricultural Statistics Service (202) 447-5446.

Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual	1988							1989	
	1988	Feb	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
		1982-84=100								
Consumer Price Index, all items	118.3	116.0	118.5	119.0	119.8	120.2	120.3	120.5	121.1	121.6
Consumer Price Index, less food	118.3	116.0	118.4	118.9	119.7	120.2	120.3	120.4	120.8	121.3
All food	118.2	115.7	118.8	119.4	120.2	120.3	120.2	120.7	122.2	122.9
Food away from home	121.8	119.7	122.1	122.5	123.0	123.4	123.7	124.1	124.7	125.2
Food at home	116.6	113.9	117.3	118.1	119.0	119.0	118.7	119.1	121.2	122.0
Meats 1/	112.2	110.2	113.4	113.2	113.4	113.0	113.0	112.7	114.0	114.3
Beef & veal	112.1	108.5	113.4	112.7	113.6	113.7	114.7	114.6	116.0	116.6
Pork	112.5	112.3	114.3	114.1	113.7	111.8	110.0	109.6	111.5	110.9
Poultry	120.7	108.4	129.0	131.7	133.4	129.4	127.2	127.1	128.8	128.4
Fish	137.4	137.0	138.1	137.9	136.0	137.4	138.7	138.9	144.0	142.9
Eggs	95.6	85.5	95.1	104.2	103.1	105.5	101.2	99.6	112.0	106.1
Dairy products 2/	108.4	107.3	107.6	108.2	108.9	109.9	110.6	111.4	112.6	113.4
Fats & oils 3/	113.1	109.5	112.6	114.9	115.9	117.1	117.1	118.5	119.6	120.5
Fresh fruit	143.0	132.6	147.8	150.1	153.3	149.7	144.3	143.2	145.4	150.0
Processed fruit	122.0	118.0	123.0	123.4	123.8	124.3	125.0	124.4	125.6	125.5
Fresh vegetables	129.3	133.7	127.0	125.9	132.1	129.4	126.7	133.0	141.4	144.4
Potatoes	119.1	106.2	125.7	132.0	124.8	125.2	126.0	128.5	130.8	133.3
Processed vegetables	112.2	107.6	111.3	113.9	116.4	117.9	118.1	118.9	120.9	121.8
Cereals & bakery products	122.1	118.7	122.1	124.0	124.7	125.6	125.9	126.6	127.9	128.9
Sugar & sweets	114.0	112.2	114.0	114.8	115.6	116.0	115.9	116.7	117.2	117.8
Beverages, nonalcoholic	107.5	107.7	107.2	107.0	107.4	108.1	108.2	107.8	109.6	111.3
Apparel commodities less footwear	114.4	108.8	111.3	111.3	117.0	119.9	119.1	116.8	113.5	113.4
Footwear	109.9	105.8	108.2	107.4	112.2	115.9	114.5	113.5	112.2	112.7
Tobacco & smoking products	145.8	142.2	147.5	148.6	148.9	149.3	149.7	149.9	157.0	158.5
Beverages, alcoholic	118.6	116.8	119.2	119.3	119.6	119.8	119.9	119.9	120.3	121.1

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ralph Parlett (202) 786-1870.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1988					1989	
	1986	1987 ¹	1988 P	Feb	Sept	Oct R	Nov	Dec	Jan	Feb
	1982=100									
Finished goods 1/	103.2	105.4	108.0	106.1	108.6	109.4	109.7	110.0	111.0	111.7
Consumer foods	107.2	109.5	112.6	109.4	115.1	114.6	114.9	115.1	116.5	117.3
Fresh fruit	112.9	112.0	112.7	106.9	119.0	111.8	122.1	116.8	107.8	110.0
Fresh & dried vegetables	97.8	103.7	105.4	96.4	116.5	111.9	115.0	110.5	109.3	133.1
Dried fruit	91.9	95.0	99.1	97.8	99.8	97.4	100.7	100.7	101.1	101.1
Canned fruit & juice	111.0	115.3	120.1	119.1	120.5	120.6	121.4	121.5	121.8	120.7
Frozen fruit & juice	103.0	113.3	129.9	130.0	130.7	129.6	129.7	129.2	127.3	122.0
Fresh veg. excl. potatoes	99.3	99.0	100.4	96.8	110.4	101.0	103.8	96.7	93.4	119.9
Canned veg. & juices	101.2	103.5	108.3	103.3	111.7	114.6	116.0	118.0	119.4	119.7
Frozen vegetables	106.6	107.3	108.5	106.6	110.0	111.4	112.0	112.7	113.1	114.3
Potatoes	104.0	120.1	114.1	100.2	123.2	134.6	140.5	144.3	150.7	178.3
Eggs	99.5	87.6	88.6	73.8	102.1	107.4	99.7	100.3	116.5	96.7
Bakery products	116.6	118.4	126.4	123.3	129.4	130.0	130.2	130.6	132.5	133.2
Meats	93.9	100.4	99.9	97.9	101.2	98.2	97.6	98.8	102.6	102.4
Beef & veal	88.1	95.5	101.4	96.4	104.4	102.4	103.6	104.7	107.5	108.1
Pork	99.9	104.9	95.2	96.4	94.8	88.3	85.1	87.3	95.0	92.9
Processed poultry	116.7	103.4	111.4	94.7	125.4	122.7	118.2	114.4	115.7	115.0
Fish	124.9	140.0	151.7	149.6	145.6	147.4	161.0	162.1	161.3	161.8
Dairy products	99.9	101.6	102.2	100.5	103.8	104.9	105.3	106.3	107.3	106.8
Processed fruits & vegetables	104.9	108.6	113.8	111.4	115.5	116.5	117.6	118.5	119.1	119.1
Shortening & cooking oil	103.3	103.9	118.9	114.5	122.5	120.9	118.4	118.7	117.0	115.7
Consumer finished goods less foods	98.4	100.7	103.1	101.5	103.0	104.1	104.5	104.8	105.8	106.6
Beverages, alcoholic	110.1	110.3	111.9	111.4	111.9	112.3	112.6	112.1	112.1	114.0
Soft drinks	109.5	111.8	114.1	113.3	114.6	115.6	115.0	115.3	115.7	116.8
Apparel	106.3	108.3	111.7	110.4	112.5	112.7	112.7	113.2	113.7	114.0
Footwear	106.8	109.3	115.2	113.7	116.2	116.4	117.0	117.4	118.1	118.8
Tobacco products	142.4	154.6	171.9	166.7	175.4	175.6	175.5	184.8	187.5	187.7
Intermediate materials 2/	99.1	101.5	107.1	104.3	108.7	108.6	109.0	109.5	110.5	110.9
Materials for food manufacturing	98.4	100.8	105.9	102.0	109.5	108.3	107.4	108.3	109.9	109.8
Flour	94.5	92.9	105.7	97.6	114.1	114.6	113.1	113.2	114.9	114.3
Refined sugar 3/	103.2	106.4	108.6	107.0	109.9	112.3	112.0	112.8	113.2	114.4
Crude vegetable oils	84.8	84.2	116.8	106.7	125.3	115.1	107.6	108.4	108.9	103.1
Crude materials 4/	87.7	93.7	95.9	94.7	96.7	95.9	94.0	97.0	101.0	101.0
Foodstuffs & feedstuffs	93.2	96.2	106.0	99.7	112.0	111.9	107.7	109.5	112.4	111.0
Fruits & vegetables 5/	103.9	106.8	108.1	100.5	117.4	111.3	117.6	112.7	108.1	122.3
Grains	79.2	71.1	97.9	83.5	112.9	114.2	107.4	108.9	115.2	111.3
Livestock	91.8	102.0	103.0	105.7	100.7	101.8	97.8	100.5	103.9	104.1
Poultry, live	129.6	101.2	121.5	86.9	142.7	141.0	128.0	121.7	122.4	121.5
Fibers, plant & animal	88.3	106.4	98.4	97.8	89.6	89.7	93.1	93.9	95.8	94.8
Fluid milk	90.9	91.8	89.1	89.1	91.2	94.3	95.1	97.5	97.0	95.4
Oilseeds	91.4	99.2	134.0	111.1	155.7	141.1	134.7	137.5	143.6	133.2
Tobacco, leaf	89.7	85.7	87.2	87.2	91.1	93.1	94.4	94.4	93.7	94.4
Sugar, raw cane	104.9	110.2	111.9	111.4	111.6	110.7	110.2	112.0	111.0	111.9
All commodities	100.1	102.8	106.9	104.8	108.1	108.2	108.3	109.0	110.3	110.8
Industrial commodities	99.9	102.5	106.3	104.6	106.8	107.1	107.4	108.1	109.4	110.0
All foods 6/	105.5	107.8	111.5	108.0	114.6	113.5	113.9	114.2	115.6	116.3
Farm products & processed foods & feeds	101.2	103.7	110.0	105.3	114.0	113.5	112.3	112.9	114.8	114.6
Farm products	92.9	95.5	104.8	97.9	111.6	110.9	107.4	108.6	111.4	110.5
Processed foods & feeds 6/	105.4	107.9	112.8	109.1	115.4	115.0	114.9	115.1	116.7	116.8
Cereal & bakery products	111.0	112.6	122.9	119.6	126.4	126.4	125.9	126.3	128.5	129.4
Sugar & confectionery	109.6	112.6	114.6	112.8	115.9	116.5	116.6	116.7	116.9	118.1
Beverages	114.5	112.5	114.3	113.0	114.7	115.3	115.2	115.7	116.0	117.6

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). P = preliminary. R = revised.

Information contact: Bureau of Labor Statistics (202) 523-1913.

Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual				1988					1989	
	1985	1986	1987	1988 P	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Market basket^{1/}											
Retail cost (1982-84=100)	104.1	106.3	111.6	116.5	113.5	119.4	119.3	118.9	119.5	121.5	122.3
Farm value (1982-84=100)	96.2	94.9	97.1	100.3	94.9	105.2	103.1	103.9	102.9	105.6	106.8
Farm-retail spread (1982-84=100)	108.3	112.5	119.4	125.3	123.5	127.1	128.0	127.0	128.4	130.1	130.6
Farm value-retail cost (%)	32.4	31.2	30.5	30.1	29.3	30.8	30.3	30.6	30.2	30.4	30.6
Meat products											
Retail cost (1982-84=100)	98.9	102.0	109.6	112.2	110.2	113.4	113.0	113.0	112.7	114.0	114.3
Farm value (1982-84=100)	91.3	94.3	101.2	99.5	99.4	100.3	97.6	97.4	97.7	102.7	102.6
Farm-retail spread (1982-84=100)	106.7	109.8	118.3	125.2	121.3	126.8	128.8	129.0	128.1	125.6	126.3
Farm value-retail cost (%)	46.8	46.8	46.7	44.9	45.7	44.8	43.7	43.7	43.9	45.6	45.4
Dairy products											
Retail cost (1982-84=100)	103.2	103.3	105.9	108.4	107.3	108.9	109.9	110.6	111.4	112.6	113.4
Farm value (1982-84=100)	95.2	92.6	93.3	90.4	90.7	91.0	94.2	96.3	97.3	97.9	98.0
Farm-retail spread (1982-84=100)	110.5	113.3	117.5	124.9	122.6	125.4	124.4	123.8	124.4	126.1	127.6
Farm value-retail cost (%)	44.2	43.0	42.3	40.0	40.5	40.1	40.3	41.8	41.9	41.7	41.5
Poultry											
Retail cost (1982-84=100)	106.2	114.2	112.6	120.7	108.4	133.4	129.4	127.2	127.1	128.8	128.4
Farm value (1982-84=100)	105.9	115.1	93.8	110.4	83.7	128.4	124.8	117.9	114.4	112.8	113.9
Farm-retail spread (1982-84=100)	106.6	113.3	134.2	132.6	136.8	139.2	134.7	137.9	141.7	147.2	145.1
Farm value-retail cost (%)	53.3	53.9	44.6	49.0	41.3	51.5	51.6	49.6	48.2	46.9	47.5
Eggs											
Retail cost (1982-84=100)	91.0	97.2	91.5	93.6	85.5	103.1	105.5	101.2	99.6	112.0	106.1
Farm value (1982-84=100)	85.7	92.4	76.8	76.7	64.6	97.0	87.6	89.2	90.1	96.6	92.3
Farm-retail spread (1982-84=100)	100.4	106.0	117.9	123.9	123.1	114.1	137.6	122.8	116.7	139.7	130.9
Farm value-retail cost (%)	60.5	61.0	53.9	52.7	48.5	60.4	53.4	56.6	58.1	55.4	55.9
Cereal & bakery products											
Retail cost (1982-84=100)	107.9	110.9	114.8	122.1	118.7	124.7	125.6	125.9	126.6	127.9	128.9
Farm value (1982-84=100)	94.3	76.3	71.0	92.3	85.3	98.9	98.8	98.9	101.0	102.0	101.1
Farm-retail spread (1982-84=100)	109.8	115.7	120.9	126.3	123.4	128.3	129.3	129.7	130.2	131.5	132.8
Farm value-retail cost (%)	10.7	8.4	7.6	9.3	8.8	9.7	9.6	9.6	9.8	9.8	9.6
Fresh fruits											
Retail cost (1982-84=100)	118.4	120.4	135.6	145.4	133.7	157.5	151.9	147.6	147.0	150.1	154.3
Farm value (1982-84=100)	110.8	103.8	113.9	113.3	105.7	121.0	115.5	123.1	110.3	105.0	107.2
Farm-retail spread (1982-84=100)	121.8	128.0	145.7	160.2	146.6	174.3	168.7	158.9	164.0	170.9	176.0
Farm value-retail cost (%)	29.6	27.4	26.5	24.6	25.0	24.3	26.0	26.4	23.7	22.1	21.9
Fresh vegetables											
Retail cost (1982-84=100)	103.5	107.7	121.6	129.3	133.7	132.1	129.4	126.7	133.0	141.4	144.4
Farm value (1982-84=100)	93.1	90.0	112.0	105.8	97.4	113.5	97.7	111.4	108.5	120.4	142.0
Farm-retail spread (1982-84=100)	108.9	116.8	126.5	141.3	152.4	141.7	145.7	134.6	145.6	152.2	145.6
Farm value-retail cost (%)	30.5	28.4	31.3	27.8	24.7	29.2	25.6	29.9	27.7	28.9	33.4
Processed fruits & vegetables											
Retail cost (1982-84=100)	107.0	105.3	109.0	117.6	113.4	120.4	121.4	121.9	121.9	123.4	123.7
Farm value (1982-84=100)	117.7	101.5	111.1	136.5	129.0	142.4	144.8	145.0	136.8	137.2	135.4
Farm-retail spread (1982-84=100)	103.7	106.4	108.3	111.7	108.5	113.5	114.1	114.7	117.3	119.1	120.1
Farm value-retail cost (%)	26.2	22.9	24.2	27.6	27.1	28.1	28.4	28.3	26.7	26.4	26.0
Fats & oils											
Retail cost (1982-84=100)	108.9	106.5	108.1	113.1	109.5	115.9	117.1	117.1	118.5	119.6	120.5
Farm value (1982-84=100)	104.3	76.2	74.1	103.3	92.5	106.3	100.9	99.2	101.0	98.9	102.0
Farm-retail spread (1982-84=100)	110.6	117.6	120.6	116.7	115.8	119.4	123.1	123.7	124.9	127.2	127.3
Farm value-retail cost (%)	25.8	19.2	18.6	24.6	22.7	24.7	23.2	22.8	22.9	22.2	22.8

	Annual				1988					1989	
	1985	1986	1987	1988 P	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Beef, Choice											
Retail price 2/ (cts./lb.)	232.6	230.7	242.5	254.7	246.3	259.7	257.8	260.4	260.0	264.3	265.2
Net carcass value 3/ (cts.)	135.2	133.1	145.3	153.9	148.3	153.6	155.4	156.0	158.1	159.8	160.9
Net farm value 4/ (cts.)	126.8	124.4	137.9	147.4	143.2	145.8	148.8	151.5	154.0	155.8	157.6
Farm-retail spread (cts.)	105.8	106.3	104.6	107.3	103.1	113.8	109.0	108.9	106.0	108.5	107.6
Carcass-retail spread 5/ (cts.)	97.4	97.6	97.2	100.8	98.0	106.0	102.5	104.4	101.9	104.5	104.3
Farm-carcass spread 6/ (cts.)	8.4	8.7	7.4	6.5	5.1	7.8	6.5	4.5	4.1	4.0	3.3
Farm value-retail price (%)	55	54	57	58	58	56	58	58	59	59	59
Pork											
Retail price 2/ (cts./lb.)	162.0	178.4	188.4	183.4	183.1	184.9	181.6	178.0	177.4	181.1	179.3
Wholesale value 3/ (cts.)	101.1	110.9	113.0	101.0	105.3	97.2	95.8	92.2	97.8	94.3	92.7
Net farm value 4/ (cts.)	71.4	82.4	82.7	69.4	75.5	65.1	62.2	58.3	66.0	66.7	65.2
Farm-retail spread (cts.)	90.6	96.0	105.7	114.0	107.6	119.8	119.4	119.7	111.4	114.4	114.1
Wholesale-retail spread 5/ (cts.)	60.9	67.5	75.4	82.4	77.8	87.7	85.8	85.8	79.6	86.8	86.6
Farm-wholesale spread 6/ (cts.)	29.7	28.5	30.3	31.6	29.8	32.1	33.6	33.9	31.8	27.6	27.5
Farm value-retail price (%)	44	46	44	38	41	35	34	33	37	37	36

1/ Retail costs are based on indexes of retail prices for domestically produced farm foods from the CPI-U published monthly by the Bureau of Labor Statistics. The farm value is the payment to farmers for quantity of farm product equivalent to retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing these foods. 2/ Estimated weighted average price of retail cuts from pork & choice yield grade 3 beef carcasses. Retail cut prices from BLS. 3/ Value of carcass quantity (beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat & bone byproducts. 4/ Market value to producer for quantity of live animal equivalent to 1 lb. of retail cuts minus value of byproducts. 5/ Represents charges for retailing & other marketing services such as fabricating, wholesaling, in-city transportation. 6/ Represents charges made for livestock marketing, processing, & transportation to city where consumed. P = preliminary.

Information contacts: Denis Dunham (202) 786-1870, Ron Gustafson (202) 786-1286.

Table 9.—Price Indexes of Food Marketing Costs
(See the March 1989 Issue.)

Information contact: Denis Dunham (202-786-1870)

Livestock & Products

Table 10.—U.S. Meat Supply & Use

	Beg. stocks	Pro- duc- tion 1/	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Consumption		Primary market price 3/
								Total	Per capita 2/	
									Pounds	
Million pounds 4/										
Beef										
1986	420	24,371	2,129	26,919	521	52	412	25,935	78.4	57.75
1987	412	23,566	2,269	26,247	604	52	386	25,205	73.4	64.60
1988 P	386	23,589	2,379	26,354	680	61	422	25,191	72.7	69.54
1989 F	422	22,915	2,200	25,537	720	60	325	24,432	69.9	70-76
Pork										
1986	289	14,063	1,122	15,474	86	132	248	15,008	58.6	51.19
1987	248	14,374	1,195	15,817	109	124	347	15,237	59.1	51.69
1988 P	347	15,684	1,137	17,168	195	135	413	16,425	63.1	43.39
1989 F	413	15,591	1,100	17,104	140	140	400	16,424	62.7	42-48
Veal										
1986	11	524	27	562	5	1	7	550	1.9	60.89
1987	7	429	24	460	7	1	4	449	1.5	78.05
1988 P	4	396	27	427	10	1	5	415	1.4	89.79
1989 F	5	390	25	420	9	1	4	406	1.4	86-92
Lamb & mutton										
1986	13	338	41	392	2	2	13	375	1.4	70.26
1987	13	315	44	372	2	2	8	360	1.3	78.09
1988 P	8	335	51	394	1	1	6	386	1.4	68.84
1989 F	6	336	55	397	1	0	7	389	1.4	63-69
Total red meat										
1986	733	39,296	3,319	43,348	613	187	680	41,868	140.2	--
1987	679	38,684	3,533	42,897	722	179	744	41,251	135.3	--
1988 P	745	40,004	3,594	44,343	886	198	831	42,415	138.5	--
1989 F	846	39,232	3,380	43,458	840	201	661	41,671	135.4	--
Broilers										
1986	27	14,316	0	14,342	566	149	24	13,603	56.3	56.9
1987	24	15,594	0	15,618	752	151	25	14,691	60.2	47.4
1988 P	25	16,056	0	16,081	765	151	36	15,129	61.5	56.3
1989 F	36	16,849	0	16,885	725	140	25	15,995	64.4	56-60
Mature chicken										
1986	144	627	0	771	16	3	163	589	2.4	--
1987	163	650	0	814	15	2	188	608	2.5	--
1988 P	188	627	0	816	26	3	157	627	2.5	--
1989 F	157	619	0	775	18	4	150	636	2.4	--
Turkeys										
1986	150	3,271	0	3,422	27	4	178	3,212	13.3	72.2
1987	178	3,828	0	4,006	33	4	282	3,686	15.1	57.8
1988 P	282	4,008	0	4,291	51	2	250	3,988	16.2	61.3
1989 F	250	4,119	0	4,369	40	4	175	4,152	16.9	67-71
Total poultry										
1986	321	18,215	0	18,535	609	156	365	17,405	72.0	--
1987	365	20,072	0	20,437	800	157	495	18,985	77.8	--
1988 P	495	20,692	0	21,187	843	156	442	19,747	80.2	--
1989 F	442	21,587	0	22,029	781	148	350	20,750	83.6	--
Red meat & poultry										
1986	1,054	57,511	3,319	61,883	1,223	343	1,045	59,273	212.3	--
1987	1,044	58,756	3,532	63,333	1,521	336	1,240	60,229	213.2	--
1988 P	1,240	60,696	3,594	65,530	1,729	354	1,288	62,159	218.8	--
1989 F	1,288	60,819	3,380	65,487	1,651	349	1,086	62,401	219.8	--

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry.
 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was .74 during 1962-85. It was lowered to .73 for 1986 & to .71 for 1987 & later.) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. P = Preliminary. F = forecast. -- = not available.

Information contacts: Ron Gustafson, Leland Southard, or Mark Weimar (202) 786-1285.

Table 11.—U.S. Egg Supply & Use

	Beg. stocks	Pro-duction	Im-ports	Total supply	Ex-ports	Ship-ments	Hatch-ing use	Ending stocks	Consumption		Wholesale price*
									Total	Per capita	
										No.	Cts./doz.
Million dozen											
1984	9.3	5,708.3	32.0	5,749.7	58.2	27.8	529.7	11.1	5,122.8	259.4	80.9
1985	11.1	5,688.0	12.7	5,711.8	70.6	30.3	548.1	10.7	5,052.0	253.3	66.4
1986	10.7	5,705.0	13.7	5,729.4	101.6	28.0	566.8	10.4	5,022.6	249.4	71.1
1987	10.4	5,802.3	5.6	5,818.3	111.2	25.1	599.1	14.4	5,068.5	249.3	61.6
1988	14.4	5,771.1	5.3	5,790.8	141.8	25.2	604.3	15.2	5,004.3	244.0	62.1
1989 F	15.2	5,600.0	6.5	5,621.7	110.0	24.0	630.0	10.0	4,847.7	234.3	71-77

* Cartoned grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 786-1714.

Table 12.—U.S. Milk Supply & Use¹

	Pro-duction	Farm use	Commercial		Im-ports	Total commercial supply	CCC net removals	Commercial		All milk price 2/
			Farm market-ings	Beg. stocks				Ending stocks	Disap-pearance	
										\$/cwt
Billion pounds										
1981	132.8	2.3	130.5	5.8	2.3	138.5	12.9	5.4	120.3	13.77
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61
1983	139.7	2.4	137.3	4.6	2.6	144.5	16.8	5.2	122.5	13.58
1984	135.4	2.9	132.5	5.2	2.7	140.5	8.6	4.9	126.9	13.46
1985	143.1	2.5	140.7	4.9	2.8	148.4	13.2	4.6	130.6	12.75
1986	143.4	2.4	141.0	4.6	2.7	148.3	10.6	4.2	133.5	12.51
1987	142.5	2.2	140.3	4.2	2.5	146.9	6.7	4.6	135.6	12.54
1988 F	145.5	2.2	143.3	4.6	2.4	150.3	8.9	4.3	137.1	12.21
1989 P	148.2	2.2	146.0	4.3	2.4	152.7	8.5	4.7	139.5	12.40

1/ Milkfat basis. Totals may not add because of rounding. 2/ Delivered to plants & dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry & Eggs

	Annual			1988					1989	
	1986	1987	1988 P	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Broilers										
Federally inspected slaughter, certified (mil. lb.)	14,265.6	15,502.5	15,984.0	1,289.7	1,377.4	1,322.3	1,260.1	1,284.6	1,385.0	1,246.1
Wholesale price, 12-city (cts./lb.)	56.9	47.4	56.3	44.9	62.8	57.7	57.1	58.8	58.0	58.1
Price of grower feed (\$/ton)	187	186	220	198	245	259	259	254	243	243
Broiler-feed price ratio 1/	3.7	3.7	3.1	2.6	3.2	2.9	2.7	2.8	2.9	2.9
Stocks beginning of period (mil. lb.)	26.6	23.9	24.8	33.0	31.1	32.0	34.6	35.3	35.9	32.8
Broiler-type chicks hatched (mil.) 2/	5,013.3	5,379.2	5,588.7	431.7	454.3	452.3	437.1	487.5	481.3	442.8
Turkeys										
Federally inspected slaughter, certified (mil. lb.)	3,133	3,717	3,903	266.9	365.7	379.3	365.3	270.5	254.1	248.0
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)	72.2	57.8	61.3	47.0	76.0	79.6	76.0	61.6	59.0	62.8
Price of turkey grower feed (\$/ton)	215	213	243	223	269	266	264	269	262	264
Turkey-feed price ratio 1/	4.1	3.9	3.0	2.6	3.4	3.6	3.6	2.8	2.7	2.9
Stocks beginning of period (mil. lb.)	150.2	178.2	282.4	281.8	551.9	572.8	583.3	303.5	249.7	262.5
Poults placed in U.S. (mil.)	225.4	240.4	242.0	23.1	16.0	16.2	18.3	20.0	23.1	23.7
Eggs										
Farm production (mil.)	68,460	69,627	69,253	5,653	5,580	5,833	5,694	5,824	5,721	5,173
Average number of layers (mil.)	278	280	286	284	274	276	276	273	272	272
Rate of lay (eggs per layer on farms)	248	248	251	20.0	20.4	21.2	20.6	21.3	21.1	19.0
Cartoned price, New York, grade A large (cts./doz.) 3/	71.1	61.6	62.1	52.7	75.6	66.0	65.3	70.4	72.0	77.1
Price of laying feed (\$/ton)	174	170	202	177	236	222	220	221	217	214
Egg-feed price ratio 1/	7.0	7.6	5.3	5.3	5.4	5.3	5.4	5.4	5.9	5.8
Stocks, first of month										
Shell (mil. doz.)	.72	1.16	1.29	.20	.75	.69	.72	.78	.27	.36
Frozen (mil. doz.)	10.0	9.8	13.1	13.9	18.7	16.8	15.2	13.7	15.0	14.8
Replacement chicks hatched (mil.)	424	428	366	28.5	30.6	30.6	29.2	27.0	26.6	27.2

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 12 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers. P = preliminary.

Information contact: Maxine Davis (202) 786-1714.

Table 14.—Dairy

	Annual			1988					1989	
	1986	1987	1988 P	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.30	11.23	11.03	10.60	11.48	11.88	12.23	12.27	11.90	11.26
Wholesale prices										
Butter, grade A chf. (cts./lb.)	144.5	140.2	132.5	131.0	134.3	132.0	131.2	131.2	131.0	131.0
Am. cheese, Wis. assembly pt. (cts./lb.)	127.3	123.2	123.8	115.6	134.6	136.4	136.3	136.0	129.1	117.6
Nonfat dry milk (cts./lb.) 2/	80.6	79.3	80.2	73.0	87.2	88.8	90.1	92.7	93.6	83.6
USDA net removals										
Total milk equiv. (mil. lb.) 3/	10,628.1	6,706.0	8,856.2	1,486.6	142.3	339.1	217.3	448.7	1,563.2	1,471.6
Butter (mil. lb.)	287.6	187.3	312.6	59.7	5.0	15.2	9.2	19.8	73.8	67.0
Am. cheese (mil. lb.)	468.4	282.0	238.1	25.4	3.4	2.2	2.3	3.8	3.5	8.5
Nonfat dry milk (mil. lb.)	827.3	559.4	267.5	39.6	0	0	0	0	0	0
Milk										
Milk prod. 21 States (mil. lb.)	121,433	121,294	123,896	9,822	9,967	10,125	9,790	10,251	10,465	9,830
Milk per cow (lb.)	13,399	13,055	14,378	1,135	1,158	1,179	1,140	1,193	1,220	1,148
Number of milk cows (1,000)	9,063	8,692	8,617	8,657	8,604	8,591	8,585	8,594	8,577	8,562
U.S. milk production (mil. lb.)	143,381	142,557	145,527	6/11,567	6/11,672	6/11,893	6/11,500	6/12,041	6/12,296	6/11,550
Stock, beginning										
Total (mil. lb.)	13,695	12,867	7,440	7,651	10,992	9,761	9,125	8,382	8,189	8,927
Commercial (mil. lb.)	4,590	4,165	4,646	4,799	5,292	4,872	4,535	4,069	4,289	4,673
Government (mil. lb.)	9,105	8,702	2,794	2,852	5,700	4,889	4,590	4,313	3,900	4,254
Imports, total (mil. lb.) 3/	2,733	2,490	2,394	196	178	210	240	235	--	--
Commercial disappearance (mil. lb.)	133,498	135,657	137,214	9,966	11,947	11,914	11,808	11,420	--	--
Butter										
Production (mil. lb.)	1,202.4	1,104.1	1,198.2	117.1	83.0	92.2	92.2	111.2	129.0	124.7
Stocks, beginning (mil. lb.)	205.5	193.0	143.2	157.3	294.4	253.4	237.3	226.2	214.7	246.6
Commercial disappearance (mil. lb.)	922.9	902.5	900.4	52.0	88.1	86.1	89.8	93.8	--	--
American cheese										
Production (mil. lb.)	2,798.2	2,716.7	2,787.0	221.0	210.1	224.1	214.1	242.1	225.6	208.7
Stocks, beginning (mil. lb.)	850.2	697.1	370.4	367.8	388.1	354.7	325.0	282.5	293.0	288.4
Commercial disappearance (mil. lb.)	2,382.8	2,444.1	2,600.4	196.5	225.0	238.6	237.7	212.7	--	--
Other cheese										
Production (mil. lb.)	2,411.1	2,627.6	2,744.7	207.8	238.5	243.4	239.9	240.6	230.9	210.8
Stocks, beginning (mil. lb.)	94.1	92.0	89.7	90.2	109.7	106.5	107.4	105.9	104.7	111.4
Commercial disappearance (mil. lb.)	2,684.9	2,880.1	2,963.9	225.0	259.8	264.7	267.4	267.3	--	--
Nonfat dry milk										
Production (mil. lb.)	1,284.1	1,059.0	968.4	85.8	60.1	56.0	56.0	73.4	87.1	85.6
Stocks, beginning (mil. lb.)	1,011.1	686.8	177.2	130.7	92.9	63.6	64.3	50.4	53.1	66.3
Commercial disappearance (mil. lb.)	479.1	495.1	722.9	39.7	69.1	50.9	66.8	67.5	--	--
Frozen dessert										
Production (mil. gal.) 4/	1,248.6	1,263.4	1,270.1	87.6	110.0	91.5	83.4	79.9	80.5	86.6

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area, high heat spray process. 3/ Milk equivalent, fat basis. 4/ Ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. -- = not available.

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

	Annual			1988					1989	
	1986	1987	1988	Feb	Sept	Oct	Nov	Dec	Jan	Feb P
U.S. wool price, Boston 1/ (cts./lb.)	191	265	438	397	450	463	475	450	450	438
Imported wool price, Boston 2/ (cts./lb.)	201	247	372	330	362	378	377	391	432	417
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	126,768	129,677	128,325	10,103	10,547	10,040	9,127	12,097	10,610	10,960
Carpet wool (1,000 lb.)	9,960	13,092	15,825	1,418	1,715	993	971	1,005	800	1,314

1/ Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up. 2/ Wool price delivered at U.S. mills, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. P = preliminary.

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

	Annual			1988					1989	
	1986	1987	1988	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Cattle on feed (7 States)										
Number on feed (1,000 head) 1/	7,920	7,643	8,066	7,869	6,689	7,144	7,934	8,000	7,765	7,700
Placed on feed (1,000 head)	20,035	21,040	20,584	1,379	2,169	2,475	1,680	1,401	1,711	1,585
Marketings (1,000 head)	19,263	19,410	19,698	1,535	1,647	1,601	1,507	1,521	1,672	1,509
Other disappearance (1,000 head)	1,049	1,207	1,187	126	67	84	107	115	104	115
Beef steer-corn price ratio,										
Omaha 2/	31.0	41.0	31.5	37.4	26.4	26.4	28.4	27.9	28.2	28.7
Hog-corn price ratio, Omaha 2/	27.8	32.8	19.6	25.7	15.9	14.9	14.7	16.2	16.4	16.3
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, Omaha	57.75	64.60	69.54	68.31	67.71	69.13	70.07	71.21	72.35	72.92
Utility cows, Omaha	37.19	44.83	46.55	48.79	48.42	47.71	42.10	45.14	44.88	46.72
Choice vealers, S. St. Paul 3/	59.92	78.74	90.23	240.42	240.42	213.75	239.00	225.94	229.63	225.06
Feeder cattle										
Choice, Kansas City, 600-700 lb.	62.79	75.36	83.67	83.53	84.00	85.81	83.90	86.13	86.00	85.56
Slaughter hogs										
Barrows & gilts, 7-markets	51.19	51.69	43.39	47.01	41.04	38.95	36.45	40.58	41.58	40.91
Feeder pigs										
S. Mo. 40-50 lb. (per head)	45.62	46.69	38.88	34.88	28.30	30.95	29.82	29.17	35.25	35.97
Slaughter sheep & lambs										
Lambs, Choice, San Angelo	69.46	78.09	68.84	77.25	59.50	63.94	65.55	68.83	68.13	68.83
Ewes, Good, San Angelo	34.78	38.62	38.88	38.25	37.38	36.88	38.75	42.08	45.69	53.28
Feeder lambs										
Choice, San Angelo	73.14	102.26	90.91	112.63	78.56	80.38	82.00	84.83	84.38	84.38
Wholesale meat prices, Midwest										
Choice steer beef, 600-700 lb.	88.98	97.21	103.34	99.50	103.15	104.36	104.73	106.20	107.30	107.98
Canner & cutter cow beef	71.31	83.70	87.77	92.18	87.73	85.58	85.32	90.03	91.23	97.88
Pork loins, 14-18 lb. 4/	104.78	106.23	97.49	94.93	97.92	85.33	77.87	93.61	89.35	90.97
Pork bellies, 12-14 lb.	65.82	63.11	41.25	48.40	33.05	34.97	33.64	34.82	36.91	31.41
Hams, skinned, 14-17 lb.	80.01	80.96	71.03	76.67	73.20	78.33	78.06	65.50	65.81	67.11
All fresh beef retail price 5/	--	212.64	224.35	217.60	225.41	230.59	232.94	232.97	234.05	233.94
Commercial slaughter (1,000 head)*										
Cattle	37,288	35,647	35,072	2,759	3,011	2,965	2,799	2,774	2,789	2,568
Steers	17,516	17,443	17,341	1,400	1,437	1,368	1,317	1,354	1,327	1,261
Heifers	11,097	10,906	10,755	816	994	965	827	817	850	808
Cows	7,961	6,610	6,334	494	522	573	601	554	561	457
Bulls & stags	714	689	642	48	58	59	54	49	51	42
Calves	3,408	2,815	2,504	210	215	206	210	210	203	181
Sheep & lambs	5,635	5,199	5,293	417	469	453	432	460	428	425
Hogs	79,598	81,081	87,738	6,687	7,715	8,092	8,132	7,942	7,332	6,791
Commercial production (mil. lb.)										
Beef	24,213	23,405	23,419	1,829	2,042	2,006	1,875	1,872	1,896	1,744
Veal	509	416	387	32	33	34	33	32	32	28
Lamb & mutton	331	309	329	26	28	28	27	29	27	27
Pork	13,998	14,312	15,614	1,184	1,359	1,442	1,462	1,424	1,310	1,204
	Annual			1987	1988				1989	
	1986	1987	1988	IV	I	II	III	IV	I	II
Cattle on feed (13 States)										
Number on feed (1,000 head) 1/	9,754	9,245	9,769	8,992	9,769	9,385	9,001	8,591	9,408	--
Placed on feed (1,000 head)	23,583	24,894	24,353	6,718	5,824	5,893	5,986	6,650	--	--
Marketings (1,000 head)	22,856	22,991	23,339	5,603	5,823	5,859	6,171	5,486	7/5,728	--
Other disappearance (1,000 head)	1,236	1,379	1,375	338	385	418	225	347	--	--
Hogs & pigs (10 States) 6/										
Inventory (1,000 head) 1/	41,100	39,690	42,995	43,150	42,995	41,345	44,065	45,000	43,010	41,259
Breeding (1,000 head) 1/	5,258	5,110	5,510	5,310	5,510	5,520	5,630	5,460	5,315	5,380
Market (1,000 head) 1/	35,842	34,580	37,485	37,840	37,485	35,825	38,435	39,540	37,695	35,875
Farrowings (1,000 head)	8,223	8,838	9,316	2,266	2,123	2,578	2,359	2,261	2,094	7/2,449
Pig crop (1,000 head)	63,835	68,888	71,848	17,572	16,489	20,175	18,007	17,216	16,321	--

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Per head starting September 1988. 4/ Prior to 1984, 8-14 lb.; 1984 & 1985, 14-17 lb.; beginning 1986, 14-18 lb. 5/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 6/ quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 7/ Intentions. *Classes estimated. -- = not available.

Information contacts: Ron Gustafson or Leland Southard (202) 786-1285.

Crops & Products

Table 17.—Supply & Utilization^{1,2}

	Area						Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price ^{5/}
	Set aside ^{3/}	Planted	Harvested	Yield	Production	Total supply ^{4/}						
	Mil. acres			Bu./acre								\$/bu.
Wheat												
1983/84	30.0	76.4	61.4	39.4	2,420	3,939	369	742	1,429	2,540	1,399	3.51
1984/85	18.3	79.2	66.9	38.8	2,595	4,003	405	749	1,424	2,578	1,425	3.39
1985/86	18.8	75.6	64.7	37.5	2,425	3,866	279	767	1,915	2,661	1,905	3.08
1986/87*	20.2	72.1	60.7	34.4	2,092	4,018	413	780	1,004	2,197	1,821	2.42
1987/88*	27.9	65.8	56.0	37.7	2,107	3,945	288	804	1,592	2,684	1,261	2.57
1988/89*	30.1	65.5	53.2	34.1	1,811	3,094	210	835	1,500	2,545	549	3.65-3.80
Rice												
	Mil. acres			Lb./acre				Mil. cwt (rough equiv.)				\$/cwt
1983/84	1.74	2.19	2.17	4,598	99.7	172.1	--	6/54.9	70.3	125.0	46.9	8.57
1984/85	.79	2.83	2.80	4,954	138.8	187.3	--	6/60.5	62.1	122.6	64.7	8.04
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	--	6/65.8	58.7	124.5	77.3	6.53
1986/87*	1.48	2.38	2.36	5,651	133.4	213.3	--	6/77.7	84.2	161.9	51.4	3.75
1987/88*	1.51	2.36	2.33	5,555	129.6	184.0	--	6/80.4	72.2	152.6	31.4	7.27
1988/89*	.93	2.93	2.90	5,511	159.5	194.6	--	6/82.2	74.0	156.2	38.4	6.25-7.00
Corn												
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
1983/84	32.2	60.2	51.5	81.1	4,175	7,700	3,818	975	1,901	6,694	1,006	3.21
1984/85	3.9	80.5	71.9	106.7	7,674	8,684	4,079	1,091	1,865	7,036	1,648	2.63
1985/86	5.4	83.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	6,496	4,040	2.23
1986/87*	13.5	76.7	69.2	119.3	8,250	12,291	4,714	1,192	1,504	7,410	4,882	1.50
1987/88*	25.6	65.7	59.2	119.4	7,072	11,958	4,738	1,229	1,732	7,699	4,259	1.94
1988/89*	23.6	67.6	58.2	84.6	4,921	9,185	6,000	1,225	2,100	7,355	1,830	2.45-2.70
Sorghum												
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
1983/84	5.7	11.9	10.0	48.7	488	927	385	10	245	640	287	2.74
1984/85	.6	17.3	15.4	56.4	866	1,154	539	18	297	854	300	2.32
1985/86	.9	18.3	16.8	66.8	1,120	1,420	664	28	178	869	551	1.93
1986/87*	3.0	15.3	13.9	67.7	938	1,489	535	12	198	746	743	1.37
1987/88*	5.2	11.8	10.6	69.7	739	1,483	564	25	231	820	663	1.70
1988/89*	5.8	10.4	9.1	63.8	578	1,240	500	20	300	820	420	2.25-2.50
Barley												
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
1983/84	1.1	10.4	9.7	52.3	509	733	282	170	92	544	189	2.47
1984/85	.5	12.0	11.2	53.4	599	799	304	170	77	551	247	2.29
1985/86	.7	13.2	11.6	51.0	591	848	333	169	22	523	325	1.98
1986/87*	2.1	13.1	12.0	50.8	611	944	298	174	137	608	336	1.61
1987/88*	4.0	11.0	10.1	52.7	530	879	258	174	126	558	321	1.81
1988/89*	4.8	9.7	7.5	38.6	291	624	210	175	65	460	164	2.75-2.85
Oats												
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
1983/84	.3	20.3	9.1	52.6	477	727	466	78	2	546	181	1.62
1984/85	.1	12.4	8.2	58.0	474	689	433	74	1	509	180	1.67
1985/86	.1	13.3	8.2	63.7	521	728	460	82	2	544	184	1.23
1986/87*	.6	14.7	6.9	56.3	386	603	395	73	3	471	133	1.21
1987/88*	1.3	18.0	6.9	54.0	374	553	361	79	1	441	112	1.56
1988/89*	1.2	13.9	5.6	39.1	219	391	201	100	1	302	89	2.60-2.75
Soybeans												
	Mil. acres			Bu./acre				Mil. bu.				\$/bu.
1983/84	.0	63.8	62.5	26.2	1,636	1,981	7/79	983	743	1,805	176	7.83
1984/85	.0	67.8	66.1	28.1	1,861	2,037	7/93	1,030	598	1,721	316	5.84
1985/86	.0	63.1	61.6	34.1	2,099	2,415	7/86	1,053	740	1,879	536	5.05
1986/87*	.0	60.4	58.3	33.3	1,940	2,476	7/104	1,179	757	2,040	436	4.78
1987/88*	.0	58.0	57.0	33.7	1,923	2,359	7/81	1,174	802	2,057	302	5.88
1988/89*	.0	58.9	57.4	26.8	1,539	1,841	7/96	1,050	550	1,696	145	7.20-7.60
Soybean oil												
	Mil. lbs.							8/ Cts./lb.				
1983/84	--	--	--	--	10,872	12,133	--	9,588	1,824	11,412	721	30.60
1984/85	--	--	--	--	11,468	12,209	--	9,917	1,660	11,577	632	29.50
1985/86	--	--	--	--	11,617	12,257	--	10,053	1,257	11,310	947	18.00
1986/87*	--	--	--	--	12,783	13,745	--	10,833	1,187	12,020	1,725	15.40
1987/88*	--	--	--	--	9/ 12,974	14,895	--	10,930	1,873	12,803	2,092	22.65
1988/89*	--	--	--	--	9/ 11,548	13,840	--	10,600	1,300	11,900	1,940	21.00-22.00
Soybean meal												
	1,000 tons							10/ \$/ton				
1983/84	--	--	--	--	22,756	23,230	--	17,615	5,360	22,975	255	188
1984/85	--	--	--	--	24,529	24,784	--	19,480	4,917	24,397	387	125
1985/86	--	--	--	--	24,951	25,338	--	19,090	6,036	25,126	212	155
1986/87*	--	--	--	--	27,758	27,970	--	20,387	7,343	27,730	240	163
1987/88*	--	--	--	--	28,060	28,300	--	21,276	6,871	28,147	153	222
1988/89*	--	--	--	--	24,647	24,800	--	19,500	5,000	24,500	300	230-240

See footnotes at end of table.

Table 17.—Supply & Utilization, continued

	Area			Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price
	Set aside	Planted	Harvested									
	3/					4/						5/
	Mil. acres		Lb./acre		Mil. bales						Cts./lb.	
Cotton 11/												
1983/84	6.8	7.9	7.3	508	7.8	15.7	--	5.9	6.8	12.7	2.8	65.30
1984/85	2.5	11.1	10.4	600	13.0	15.8	--	5.5	6.2	11.8	4.1	58.70
1985/86	3.6	10.7	10.2	630	13.4	17.6	--	6.4	2.0	8.4	9.4	56.50
1986/87*	3.4	10.0	8.5	552	9.7	19.1	--	7.4	6.7	14.1	5.0	52.40
1987/88*	3.2	10.4	10.0	706	14.8	19.8	--	7.6	6.6	14.2	5.8	64.30
1988/89*	1.6	12.5	11.9	623	15.4	21.2	--	7.2	5.7	12.9	8.4	--

*April 11, 1989 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soybean & soybean meal. 2/ Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3/ Includes diversion, PIK, & acreage reduction programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Includes seed. 8/ Average of crude soybean oil, Decatur. 9/ Includes 196 million pounds in imports for 1987/88 & 300 million in 1988/89. 10/ Average of 44 percent, Decatur. 11/ Upland & extra long staple. Stock estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. -- = not available.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food Grains

	Marketing year 1/				1988				1989	
	1984/85	1985/86	1986/87	1987/88	Feb	Oct	Nov	Dec	Jan	Feb
Wholesale prices										
Wheat, No. 1 HRW,										
Kansas City (\$/bu.) 2/	3.74	3.28	2.72	2.96	3.28	4.13	4.18	4.25	4.40	4.37
Wheat, DNS,										
Minneapolis (\$/bu.) 2/	3.70	3.25	2.62	2.92	3.26	4.17	4.09	4.20	4.42	4.37
Rice, S.W. La. (\$/cwt) 3/	17.98	16.11	10.25	19.25	24.45	14.50	14.50	14.10	14.00	14.20
Wheat										
Exports (mil. bu.)	1,424	915	1,004	1,592	147	102	98	109	--	--
Mill grind (mil. bu.)	676	703	755	753	58	69	69	63	63	--
Wheat flour production (mil. cwt)	301	314	335	336	26	31	31	28	29	--
Rice										
Exports (mil. cwt, rough equiv.)	62.1	58.7	84.2	72.2	4.2	5.5	7.5	8.9	7.0	--

	Marketing year 1/			1987		1988			1989	
	1985/86	1986/87	1987/88	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb
Wheat										
Stocks, beginning (mil. bu.)	1,425	1,905	1,821	1,820.9	2,976.5	2,500.6	1,923.5	1,260.8	2,253.6	1,709.9
Domestic use										
Food (mil. bu.)	674	696	719	179.3	191.1	168.6	180.0	183.0	190.0	176.0
Seed, feed & residual (mil. bu.) 4/	372	497	378	367.8	-18.6	-2.0	25.6	280.7	28.9	-32.4
Exports (mil. bu.)	915	1,004	1,592	409.9	308.5	413.1	460.6	363.4	330.1	350.0

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ Long grain, milled basis. 4/ Residual includes feed use. -- = not available.

Information contacts: Ed Allen & Janet Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1988				1989	
	1984/85	1985/86	1986/87	1987/88	Feb	Oct	Nov	Dec	Jan	Feb
U.S. price, SLM,										
1-1/16 in. (cts./lb.) 2/	60.5	60.0	53.2	63.1	57.8	52.2	53.4	54.8	55.7	55.4
Northern Europe prices										
Index (cts./lb.) 3/	69.2	48.9	62.0	72.7	67.5	57.6	58.6	61.3	63.1	63.0
U.S. M 1-3/32 in. (cts./lb.) 4/	73.9	64.8	61.8	76.3	69.8	62.1	63.9	65.8	67.2	68.1
U.S. mill consumpt. (1,000 bales)	5,545	6,399	7,452	7,617	649	588	581	496	629	597
Exports (thou bales)	6,201	1,969	6,684	6,582	740	235	398	670	483	573
Stocks, beginning (1,000 bales)	2,775	4,102	9,348	5,026	12,540	6,285	10,196	14,155	15,635	15,169

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) index; average of five lowest priced of 11 selected growths. 4/ Memphis territory growths.

Information contact: Bob Skinner (202) 786-1840.

Table 20.—Feed Grains

	Marketing year 1/				1988				1989	
	1984/85	1985/86	1986/87	1987/88	Feb	Oct	Nov	Dec	Jan	Feb
Wholesale prices										
Corn, no. 2 yellow, Chicago (\$/bu.)	2.79	2.35	1.64	2.14	2.01	2.81	2.65	2.69	2.74	2.72
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	4.46	3.72	2.73	3.40	3.24	4.17	4.00	4.23	4.24	4.26
Barley, feed, Duluth (\$/bu.) 2/	2.09	1.53	1.44	1.78	1.77	2.32	2.27	2.14	2.24	2.33
Barley, malting, Minneapolis (\$/bu.)	2.55	2.24	1.89	2.04	2.15	4.39	4.14	3.82	4.14	4.19
Exports 3/										
Corn (mil. bu.)	1,865	1,241	1,504	1,732	123.1	174.0	151.0	173.5	176.0	154.7
Feed grains (mil. metric tons) 4/	56.6	36.6	46.3	52.6	3.8	4.9	4.4	5.4	5.3	4.8
	Marketing year 1/				1987				1988	
	1984/85	1985/86	1986/87	1987/88	Sept-Nov	Dec-Feb	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb
Corn										
Stocks, beginning (mil. bu.)	1,006	1,648	4,040	4,882	4,882	9,769	7,635	5,836	4,259	7,072
Domestic use										
Feed (mil. bu.)	4,079	4,095	4,714	4,746	1,488	1,444	960	839	1,338	1,078
Food, seed, ind. (mil. bu.)	1,091	1,160	1,192	1,224	292	282	330	323	289	280
Exports (mil. bu.)	1,865	1,241	1,504	1,720	398	408	514	414	482	510
Total use (mil. bu.)	7,036	6,496	7,410	7,690	2,178	2,134	1,804	1,577	2,109	1,868

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Excludes products. 4/ Aggregated data for corn, sorghum, oats, & barley.

Information contact: James Cole (202) 786-1840.

Table 21.—Fats & Oils

	Marketing year *				1988					1989
	1984/85	1985/86	1986/87	1987/88	Jan	Sept	Oct	Nov	Dec	Jan
Soybeans										
Wholesale price, no. 1 yellow, Chicago (\$/bu.)	5.88	5.20	5.03	6.67	6.13	8.33	7.82	7.57	7.74	7.70
Crushings (mil. bu.)	1,030.5	1,052.8	1,178.8	1,174.5	106.7	79.9	94.4	101.0	100.7	99.8
Exports (mil. bu.)	598.2	740.7	756.9	801.6	80.1	26.9	50.2	61.3	69.3	66.6
Stocks, beginning (mil. bu.)	175.7	316.0	536.0	436.0	145.0	59.7	61.4	136.6	147.4	138.6
Soybean oil										
Wholesale price, crude, Decatur (cts./lb.)	29.52	18.02	15.36	22.92	21.98	25.55	23.42	21.55	22.16	21.13
Production (mil. lb.)	11,467.9	11,617.3	12,783.1	12,974.5	1,170.2	901.3	1,047.4	1,108.5	1,110.4	1,105.8
Domestic disap. (mil. lb.)	9,888.5	10,045.9	10,820.2	10,734.1	804.0	838.2	893.4	741.1	753.7	838.0
Exports (mil. lb.)	1,659.9	1,257.3	1,184.5	1,873.2	25.7	183.2	200.1	110.6	119.9	104.5
Stocks, beginning (mil. lb.)	720.5	632.5	946.6	1,725.0	2,050.5	2,212.4	2,092.2	2,046.2	2,303.0	2,539.9
Soybean meal										
Wholesale price, 44% protein, Decatur (\$/ton)	125.46	154.88	162.61	221.90	193.75	264.90	259.75	248.20	246.00	249.30
Production (1,000 ton)	24,529.3	24,951.3	27,758.8	28,060.2	2,554.4	1,897.8	2,235.5	2,399.4	2,390.0	2,359.8
Domestic disap. (1,000 ton)	19,481.3	19,117.2	20,387.4	21,275.9	1,825.2	1,567.9	1,609.4	1,962.7	1,737.9	1,723.2
Exports (1,000 ton)	4,916.5	6,009.3	7,343.0	6,871.0	635.0	441.0	511.8	409.0	594.1	548.0
Stocks, beginning (1,000 ton)	255.4	386.9	211.7	240.2	296.2	264.6	153.5	267.8	295.6	353.6
Margarine, wholesale price, Chicago, white (cts./lb.)	55.5	51.2	40.3	40.3	46.75	57.33	56.33	55.39	55.26	54.63

* Beginning September 1 for soybeans; October 1 for soybean meal & oil; calendar year for margarine.

Information contacts: Roger Hoskin (202) 786-1840, Tom Bickerton (202) 786-1824.

Table 22.—Farm Programs, Price Supports, Participation & Payment Rates

	Target price	Loan rate	Findley loan rate	Payment rates		PIK	Base acres	Program 1/	Participation rate 2/
				Deficiency	Paid land diversion				
									</

1/ Percentage of base acres that farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. In addition to the percentages shown for 1983/84, farmers had the option of submitting bids to retire their entire base acres. 2/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 3/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1983 & 1984 PIK rates apply only to the 10-30 and 10-20 portions, respectively. 4/ Rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 5/ Annual average world market price. 6/ Guaranteed to farmers signed up for 0/92. 7/ The sorghum, oats, & barley programs were the same as for corn each year except 1983/84, when PIK was not offered on barley & oats, & in 1988 for oats. 8/ There are no target prices, acreage programs, or payment rates for soybeans. 9/ Loan rate is not to be announced prior to August 1, 1989. 10/ Loan repayment rate. 11/ Loans may be repaid at the lower of the loan rate or world market prices.

Information contact: James Cole (202) 786-1840.

Table 23.—Fruit

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F
Citrus 1/												
Production (1,000 ton)	14,255	13,329	16,484	15,105	12,057	13,608	10,792	10,525	11,051	11,968	12,641	13,166
Per capita consumpt. (lbs.) 2/	115.1	107.5	108.4	112.6	104.4	109.3	119.9	102.9	109.1	118.0	114.9	--
Noncitrus 3/												
Production (1,000 tons)	12,274	12,460	13,689	15,152	12,961	14,217	14,154	14,292	14,189	13,917	16,008	15,271
Per capita consumpt. (lbs.) 2/	84.5	83.0	85.7	87.3	88.0	89.0	88.9	93.7	92.3	95.7	101.9	--
	1988										1989	
F.o.b. shipping point prices	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Apples (\$/carton) 4/	11.08	10.96	10.98	14.21	23.87	23.05	20.45	13.80	12.15	12.63	10.78	13.94
Pears (\$/box) 5/	8.94	12.88	15.14	17.50	--	--	--	--	12.48	12.33	9.70	10.58
Oranges (\$/box) 6/	6.24	6.79	8.25	8.42	6.41	4.90	4.17	5.48	5.82	6.50	6.20	6.21
Grapefruit (\$/box) 6/	5.02	4.92	4.53	3.36	6.85	4.09	7.34	7.57	4.77	4.71	3.72	3.34
Stocks, ending												
Fresh apples (mil. lbs.)	1,584.1	1,092.7	552.2	248.1	95.0	5.1	1,857.7	4,601.8	3,904.3	3,265.8	2,659.6	2,094.1
Fresh pears (mil. lbs.)	99.7	49.2	17.9	2.7	--	117.6	434.0	425.7	368.3	295.5	234.6	164.9
Frozen fruits (mil. lbs.)	634.6	593.3	548.5	657.3	864.0	981.4	997.5	1,116.0	1,011.8	937.3	834.5	747.5
Frozen orange juice (mil. lbs.)	1,004.1	1,018.7	1,120.1	1,154.7	1,001.8	862.5	693.1	639.7	587.7	721.6	980.9	1,156.2
1/ Crop year beginning with year indicated. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 80-113's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 90-135's. 6/ U.S. equivalent on-tree returns.												
F = forecast. -- = not available.												
Information contact: Ben Huang (202) 786-1885.												

Table 24.—Vegetables

	Calendar Year											
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988		
Production												
Total vegetables (1,000 cwt) 1/	413,925	381,370	379,123	431,515	403,320	457,392	453,769	445,436	464,141	452,731		
Fresh (1,000 cwt) 1/ 2/	190,859	190,228	194,694	207,924	197,919	217,132	217,932	216,267	219,689	225,784		
Processed (tons) 3/	11,153,300	9,557,100	9,221,660	11,179,590	10,270,050	12,013,020	11,791,860	11,616,560	12,222,620	11,347,370		
Mushrooms (1,000 lbs.)	470,069	469,576	517,146	490,826	561,531	595,681	587,956	614,393	631,690	--		
Potatoes (1,000 cwt)	342,447	302,857	338,591	355,131	333,911	362,612	407,109	361,511	385,462	349,973		
Sweetpotatoes (1,000 cwt)	13,370	10,953	12,799	14,833	12,083	12,986	14,853	12,674	12,064	11,832		
Dry edible beans (1,000 cwt)	20,552	26,729	32,751	25,563	15,520	21,070	22,175	22,886	25,909	19,230		
	1988											
	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	1989
Shipments												
Fresh (1,000 cwt) 4/	23,141	18,271	18,927	26,488	36,998	21,631	21,791	15,215	16,475	20,999	16,579	18,006
Potatoes (1,000 cwt)	12,702	8,890	14,970	12,356	12,791	7,461	10,014	9,963	9,958	13,796	9,051	9,306
Sweetpotatoes (1,000 cwt)	343	366	218	174	127	91	212	262	305	876	460	246
1/ 1983 data are not comparable with 1984 & 1985. 2/ Estimate reinstated for asparagus with the 1984 crop; all other years also include broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 3/ Estimates reinstated for cucumbers with the 1984 crop; all other years also include snap beans, sweet corn, green peas, & tomatoes. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. -- = not available.												
Information contacts: Shannon Hamm or Cathy Greene (202) 786-1884.												

Table 25.—Other Commodities

	Annual					1988					1989
	1984	1985	1986	1987	1988	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	
Sugar											
Production 1/	5,890	5,969	6,257	7,309	7,069	2,082	772	642	3,573	--	
Deliveries 1/	8,454	8,035	7,786	8,167	8,188	1,951	1,983	2,147	2,107	--	
Stocks, ending 1/	3,005	3,126	3,225	3,195	3,117	3,567	2,467	1,316	3,117	--	
Coffee											
Composite green price N.Y. (cts./lb.)	142.95	137.46	185.18	109.14	115.59	121.98	121.44	114.20	120.75	126.67	
Imports, green bean equiv. (mil. lbs.) 2/	2,411	2,550	2,596	2,638	2,072	584	422	594	472	565	
	Annual					1988					1989
	1986	1987	1988	Jan	Aug	Sept	Oct	Nov	Dec	Jan	
Tobacco											
Prices at auctions 3/											
Flue-cured (\$/lb.)	1.52	1.59	1.61	--	1.47	1.67	1.71	1.61	--	--	
Burley (\$/lb.)	1.57	1.56	1.62	1.51	NQ	NQ	NQ	1.63	1.62	1.60	
Domestic consumption 4/											
Cigarettes (bil.)	584.0	577.0	543.3	32.4	34.4	51.9	46.9	56.3	39.5	--	
Large cigars (mil.)	3,090	2,760	2,541	151.4	234.4	245.4	217.4	209.7	203.3	--	
1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured, Oct.-Sept. for burley. 4/ Taxable removals. P = preliminary.											
-- = not available. NQ = no quote.											
Information contacts: sugar, Peter Buzzanell (202) 786-1888, coffee, Fred Gray (202) 786-1888, tobacco, Verner Grise (202) 786-1890.											

Table 26.—World Supply & Utilization of Major Crops, Livestock, & Products

	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88 P	1988/89 F
	Million units						
Wheat							
Area (hectares)	237.3	228.8	231.0	229.3	228.1	219.8	219.2
Production (metric tons)	477.3	489.3	511.9	500.0	530.6	504.0	500.8
Exports (metric tons) 1/	98.7	102.0	107.0	85.0	90.7	105.4	98.7
Consumption (metric tons) 2/	460.1	474.1	493.0	496.1	522.3	534.4	536.4
Ending stocks (metric tons) 3/	130.0	145.2	164.0	167.9	176.1	145.7	110.1
Coarse grains							
Area (hectares)	338.7	335.1	334.7	341.2	336.8	323.6	325.8
Production (metric tons)	783.9	687.6	815.8	844.0	835.6	792.3	723.3
Exports (metric tons) 1/	90.0	93.4	100.4	83.2	84.1	83.3	97.5
Consumption (metric tons) 2/	753.3	758.8	782.6	779.7	809.9	812.7	802.7
Ending stocks (metric tons) 3/	181.4	110.7	143.9	208.1	233.8	213.4	134.1
Rice, milled							
Area (hectares)	140.6	144.2	144.3	144.9	145.1	141.1	144.1
Production (metric tons)	286.5	307.9	318.8	320.0	318.3	311.9	322.8
Exports (metric tons) 4/	11.9	12.6	11.4	12.6	12.8	12.0	12.5
Consumption (metric tons) 2/	286.5	304.5	310.6	319.5	322.5	319.2	323.0
Ending stocks (metric tons) 3/	43.3	46.6	54.9	54.2	50.0	42.8	42.5
Total grains							
Area (hectares)	716.6	708.1	710.0	715.4	710.0	684.5	689.1
Production (metric tons)	1,547.7	1,484.8	1,646.5	1,664.0	1,684.5	1,608.2	1,546.9
Exports (metric tons) 1/	200.6	208.0	218.8	180.8	187.6	200.7	208.7
Consumption (metric tons) 2/	1,499.9	1,537.4	1,586.2	1,595.3	1,654.7	1,666.3	1,662.1
Ending stocks (metric tons) 3/	354.7	302.5	362.8	430.2	459.9	401.9	286.7
Oilseeds							
Crush (metric tons)	143.5	135.8	150.6	155.0	161.3	165.8	166.8
Production (metric tons)	178.2	165.0	190.9	196.0	194.2	206.6	198.8
Exports (metric tons)	35.2	33.0	33.1	34.6	37.7	39.4	33.4
Ending stocks (metric tons)	20.5	15.7	21.1	26.8	23.3	23.9	17.3
Meals							
Production (metric tons)	98.1	92.5	101.8	104.9	110.3	113.7	112.8
Exports (metric tons)	31.6	29.7	32.3	34.4	36.7	36.1	37.0
Oils							
Production (metric tons)	43.4	42.1	46.2	49.4	50.4	52.6	53.4
Exports (metric tons)	14.0	13.7	15.6	16.4	16.9	17.4	17.6
Cotton							
Area (hectares)	31.4	31.0	33.9	31.9	29.9	32.2	34.2
Production (bales)	68.1	65.6	88.2	79.6	70.4	80.6	84.3
Exports (bales)	19.5	19.2	20.2	20.2	26.0	23.7	24.5
Consumption (bales)	68.3	68.3	70.0	75.8	82.5	83.4	82.8
Ending stocks (bales)	25.2	24.0	42.4	47.2	34.5	32.1	33.3
	1983	1984	1985	1986	1987	1988	1989 F
Red meat							
Production (metric tons)	97.5	99.6	103.5	106.4	108.8	109.9	110.4
Consumption (metric tons)	95.8	97.6	101.5	105.3	107.1	108.6	109.1
Exports (metric tons) 1/	5.9	5.9	6.2	6.6	6.6	6.7	6.9
Poultry							
Production (metric tons)	24.4	25.2	26.2	27.4	29.2	30.1	31.1
Consumption (metric tons)	24.3	24.8	26.0	27.0	28.8	29.7	30.7
Exports (metric tons) 1/	1.3	1.3	1.2	1.3	1.5	1.5	1.5
Dairy							
Milk production (metric tons)	413.0	413.5	419.1	426.8	427.1	428.7	433.5

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1983 data correspond with 1982/83, etc. P = preliminary. F = forecast.

Information contacts: Frederic Surls (202) 786-1824; red meat & poultry, Linda Bailey (202) 786-1286; dairy, Sara Short (202) 786-1769.

Table 27.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1988					1989	
	1986	1987	1988	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.19	3.11	3.97	3.60	4.36	4.42	4.48	4.55	4.75	4.70
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.27	1.95	2.93	2.24	3.10	3.08	2.90	3.00	3.03	3.00
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.16	1.88	2.52	2.13	2.81	2.76	2.61	2.79	2.81	2.81
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	5.45	5.55	7.81	6.46	8.73	8.10	7.84	8.07	8.09	7.89
Soybean oil, Decatur (cts./lb.)	16.36	15.85	23.52	20.79	25.06	23.13	21.31	21.75	20.98	21.02
Soybean meal, Decatur (\$/ton)	157.62	175.57	234.75	184.39	265.02	258.06	248.95	246.48	248.76	234.18
Cotton, 8-market avg. spot (cts./lb.)	53.47	64.35	57.25	57.83	51.26	52.20	54.40	54.85	55.67	55.39
Tobacco, avg. price at auction (cts./lb.)	153.96	144.34	148.95	141.57	156.75	159.62	162.15	162.38	162.27	159.74
Rice, f.o.b. mill, Houston (\$/cwt)	14.60	13.15	19.60	24.50	16.00	15.25	15.00	15.00	15.00	15.00
Inedible tallow, Chicago (cts./lb.)	9.03	13.79	16.64	17.08	16.00	15.02	14.18	16.33	14.90	16.00
Import commodities										
Coffee, N.Y. spot (\$/lb.)	2.01	1.09	1.21	1.28	1.15	1.13	1.17	1.31	1.46	1.31
Rubber, N.Y. spot (cts./lb.)	42.87	50.65	59.20	53.75	60.08	55.17	52.98	54.13	55.95	59.34
Cocoa beans, N.Y. (\$/lb.)	.88	.87	.69	.78	.54	.58	.64	.66	.64	.68

Information contact: Mary Teymourian (202) 786-1820.

Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates ¹

	1988									1989		
	Apr	May	June	July	Aug	Sept	Oct P	Nov P	Dec P	Jan P	Feb P	Mar P
	1980=100											
Total U.S. trade 2/	99.4	100.3	103.6	108.4	110.5	110.5	107.6	103.5	103.3	106.9	107.9	107.5
Agricultural trade												
U.S. markets	103.1	103.1	104.6	106.7	107.3	108.7	106.4	103.6	103.2	105.2	105.6	105.5
U.S. competitors	124.7	124.6	125.1	126.6	128.1	128.7	127.7	126.1	125.5	127.4	128.2	128.3
Wheat												
U.S. markets	114.0	114.0	114.2	116.3	116.5	120.3	118.6	117.4	118.2	122.5	123.3	125.0
U.S. competitors	120.0	119.3	119.2	119.7	120.7	119.7	116.6	114.2	111.3	110.3	109.7	108.0
Soybeans												
U.S. markets	99.0	99.4	101.7	105.5	106.7	106.7	104.2	100.6	100.4	103.2	103.8	103.7
U.S. competitors	187.1	188.5	190.4	186.3	185.9	177.9	176.0	178.8	173.1	172.3	170.2	167.7
Corn												
U.S. markets	92.1	92.1	94.3	95.7	96.0	96.5	94.0	90.8	90.2	91.5	91.7	91.0
U.S. competitors	163.6	164.8	169.6	170.7	171.6	164.8	159.3	155.0	148.8	145.9	142.8	138.5
Cotton												
U.S. markets	100.0	99.8	100.8	103.2	103.7	104.0	102.1	99.1	98.6	100.2	100.4	99.8
U.S. competitors	103.8	102.8	101.0	100.7	99.5	102.0	99.5	97.7	96.5	96.3	95.4	95.1

^{1/} Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. ^{2/} Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 786-1706.

Table 29.—Trade Balance

	Fiscal year 1/									Jan
	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1989
	\$ million									
Exports										
Agricultural	43,780	39,097	34,769	38,027	31,201	26,309	27,876	35,334	36,500	3,360
Nonagricultural	185,423	176,308	159,373	170,014	179,236	176,628	202,911	259,013	--	22,056
Total 2/	229,203	215,405	194,142	208,041	210,437	202,937	230,787	294,347	--	25,416
Imports										
Agricultural	17,218	15,485	16,373	18,916	19,740	20,875	20,650	21,011	21,000	1,938
Nonagricultural	237,469	233,349	230,527	297,736	313,722	342,855	367,374	409,141	--	33,957
Total 3/	254,687	248,834	246,900	316,652	333,462	363,730	388,024	430,152	--	35,895
Trade balance										
Agricultural	26,562	23,612	18,396	19,111	11,461	5,434	7,226	14,323	15,500	1,422
Nonagricultural	-52,046	-57,041	-71,154	-127,722	-134,486	-166,227	-164,463	-150,128	--	-11,901
Total	-25,484	-33,429	-52,758	-108,611	-123,025	-160,793	-157,237	-135,805	--	-10,479

^{1/} Fiscal years begin October 1 & end September 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988. ^{2/} Domestic exports including Department of Defense shipments (F.A.S. value). ^{3/} Imports for consumption (customs value). F = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports & Imports

	Fiscal year*				Jan	Fiscal year*				Jan
	1986	1987	1988	1989 F	1989	1986	1987	1988	1989 F	1989
	1,000 units					\$ million				
EXPORTS										
Animals, live (no.) 1/	570	275	1,082	--	116	344	331	452	--	43
Meats & preps., excl. poultry (mt)	451	548	631	2/600	54	1,012	1,300	1,797	--	155
Dairy products (mt)	480	445	388	--	31	431	491	536	500	21
Poultry meats (mt)	265	376	390	400	30	282	406	424	--	32
Fats, oils, & greases (mt)	1,355	1,220	1,362	3/1,400	98	477	417	545	--	40
Hides & skins incl. furskins	--	--	--	--	--	1,440	1,666	1,838	--	114
Cattle hides, whole (no.) 1/	25,596	24,333	23,282	--	1,609	1,131	1,254	1,457	--	84
Mink pelts (no.) 1/	2,697	2,760	2,455	--	224	65	103	88	--	8
Grains & feeds (mt)	74,358	90,211	108,905	--	9,719	9,472	9,059	12,581	4/16,300	1,406
Wheat (mt)	25,501	28,204	40,501	39,000	3,153	3,260	2,877	4,467	5/6,200	507
Wheat flour (mt)	1,094	1,305	1,046	1,200	82	203	207	171	--	17
Rice (mt)	2,382	2,454	2,173	2,400	233	648	551	731	700	69
Feed grains, incl. products (mt)	36,236	47,606	53,308	59,000	5,294	3,817	3,752	5,209	7,100	653
Feeds & fodders (mt)	8,392	10,113	11,233	6/11,000	909	1,286	1,455	1,719	--	138
Other grain products (mt)	1,015	755	908	--	69	332	285	361	--	30
Fruits, nuts, and preps. (mt)	2,003	2,146	2,409	--	196	1,766	2,050	2,368	--	173
Fruit juices incl. froz. (1,000 hectoliters) 1/	3,652	4,364	5,497	--	270	148	185	252	--	15
Vegetables & preps. (mt)	1,442	1,629	1,826	--	183	997	1,176	1,282	--	96
Tobacco, unmanufactured (mt)	224	224	229	200	26	1,318	1,203	1,296	1,300	164
Cotton, excl. linters (mt)	482	1,306	1,588	1,100	105	678	1,419	2,136	1,700	143
Seeds (mt)	269	305	286	--	32	367	371	415	400	44
Sugar, cane or beet (mt)	375	582	318	--	24	75	113	98	--	8
Oilseeds & products (mt)	27,583	29,725	29,471	--	2,468	6,271	6,308	7,700	6,900	763
Oilseeds (mt)	20,684	21,905	21,366	--	1,860	4,394	4,423	5,238	--	559
Soybeans (mt)	20,139	21,394	20,908	15,400	1,804	4,174	4,205	5,008	4,500	531
Protein meal (mt)	5,614	6,786	6,406	4,500	498	1,132	1,347	1,502	1,200	143
Vegetable oils (mt)	1,284	1,035	1,699	--	110	746	538	961	--	61
Essential oils (mt)	7	8	9	--	2	105	111	120	--	22
Other	568	565	668	--	41	1,126	1,273	1,495	--	120
Total	109,862	129,290	148,280	145,000	13,009	26,309	27,876	35,334	38,000	3,360
IMPORTS										
Animals, live (no.) 1/	1,885	1,994	2,238	--	329	637	610	729	600	93
Meats & preps., excl. poultry (mt)	1,139	1,282	1,280	--	115	2,248	2,797	2,788	--	244
Beef & veal (mt)	693	778	779	750	75	1,252	1,575	1,681	1,600	163
Pork (mt)	406	462	456	435	35	900	1,125	1,001	1,900	69
Dairy products (mt)	400	461	337	400	19	786	849	881	800	55
Poultry & products 1/	--	--	--	--	--	101	112	97	--	9
Fats, oils, & greases (mt)	22	21	20	--	2	17	18	19	--	1
Hides & skins, incl. furskins 1/	--	--	--	--	--	200	304	247	--	25
Wool, unmanufactured (mt)	53	60	56	--	5	160	201	292	--	28
Grains & feeds (mt)	2,311	2,336	3,050	3,100	317	668	727	868	900	90
Fruits, nuts, & preps., excl. juices (mt)	4,637	4,840	4,797	4,895	453	1,976	2,179	2,169	--	201
Bananas & plantains (mt)	3,042	3,106	3,030	3,050	265	740	817	820	800	74
Fruit juices (1,000 hectoliters) 1/	31,539	34,059	26,754	27,000	2,277	698	728	767	--	71
Vegetables & preps. (mt)	2,199	2,446	2,521	2,500	334	1,560	1,509	1,593	1,600	197
Tobacco, unmanufactured (mt)	208	225	217	210	15	606	634	611	600	47
Cotton, unmanufactured (mt)	41	38	36	--	1	14	7	9	--	1
Seeds (mt)	89	133	143	140	20	111	156	153	200	21
Nursery stock & cut flowers 1/	--	--	--	--	--	353	369	419	--	33
Sugar, cane or beet (mt)	1,905	1,492	1,069	--	104	654	497	368	--	45
Oilseeds & products (mt)	1,508	1,572	1,772	1,750	168	639	579	838	900	73
Oilseeds (mt)	197	165	208	--	57	69	56	71	--	22
Protein meal (mt)	138	245	253	--	44	15	30	42	--	8
Vegetable oils (mt)	1,173	1,162	1,311	--	68	555	493	725	--	43
Beverages excl. fruit juices (1,000 hectoliters) 1/	15,488	15,547	15,583	--	1,008	1,848	1,923	2,008	--	117
Coffee, tea, cocoa, spices (mt)	1,940	1,915	1,842	--	185	6,099	4,868	4,274	--	378
Coffee, incl. products (mt)	1,223	1,206	1,050	1,000	99	4,400	3,233	2,600	2,900	226
Cocoa beans & products (mt)	507	503	562	530	67	1,189	1,087	1,164	1,000	120
Rubber & allied gums (mt)	801	824	846	840	101	615	714	949	900	119
Other	--	--	--	--	--	885	868	931	--	90
Total	--	--	--	--	--	20,875	20,650	21,011	21,000	1,938

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988. 1/ Not included in total volume. 2/ Forecasts for footnoted items 2/-6/ are based on slightly different groups of commodities. Fiscal 1988 exports of categories used in the 1989 forecasts were 2/ 561,000 m. tons. 3/ 1,347 million dollars 4/ 12,743 million. 5/ 4,638 million; i.e. includes flour. 6/ 11,095 million m. tons. F = forecast. -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*				Jan	Change from year* earlier				Jan
	1986	1987	1988	1989 F	1989	1986	1987	1988	1989 F	1989
	\$ million					Percent				
Western Europe	6,848	7,219	8,029	7,800	775	-5	5	11	-2	1
European Community (EC-12)	6,432	6,787	7,513	7,300	736	-4	5	11	-3	2
Belgium-Luxembourg	361	423	429	--	58	-23	17	1	--	2
France	431	495	565	--	48	9	15	14	--	4
Germany, Fed. Rep.	1,001	1,266	1,306	--	100	11	26	3	--	-33
Italy	693	733	713	--	50	2	6	-3	--	-11
Netherlands	2,042	1,954	2,087	--	212	6	-4	7	--	15
United Kingdom	628	666	819	--	64	0	6	23	--	12
Portugal	308	271	340	--	33	-39	-12	25	--	65
Spain, incl. Canary Islands	723	658	848	--	134	-13	-9	29	--	40
Other Western Europe	415	432	516	500	38	-19	4	20	0	-16
Switzerland	128	145	191	--	15	-45	13	32	--	0
Eastern Europe	447	453	559	500	48	-16	1	23	-11	14
German Dem. Rep.	52	66	67	--	12	-36	27	0	--	140
Poland	42	63	167	--	0	-66	50	165	--	-100
Yugoslavia	134	131	104	--	6	-2	-2	-21	--	-25
Romania	112	115	93	--	1	27	3	-19	--	-50
USSR	1,105	659	1,934	2,900	325	-56	-40	193	50	44
Asia	10,494	11,990	15,928	17,700	1,440	-12	14	33	11	15
West Asia (Mideast)	1,243	1,664	1,903	1,900	121	-14	34	14	0	-16
Turkey	111	117	120	--	22	-13	5	3	--	340
Iraq	335	528	735	900	48	-10	58	39	29	-28
Israel	255	244	334	--	15	-15	-4	37	--	-38
Saudi Arabia	335	489	464	400	19	-12	46	-5	-13	-41
South Asia	517	345	805	--	135	-14	-33	133	--	487
Bangladesh	94	111	107	--	7	-54	18	-3	--	250
India	90	93	354	--	10	-30	3	281	--	43
Pakistan	285	98	276	400	118	25	-66	181	33	2,850
China	83	235	613	1,200	114	-65	183	161	96	338
Japan	5,139	5,554	7,274	8,200	676	-9	8	31	13	14
Southeast Asia	724	708	1,015	--	95	-14	-2	43	--	2
Indonesia	172	152	238	--	7	-16	-12	56	--	-68
Philippines	269	259	345	300	37	-6	-4	33	0	95
Other East Asia	2,788	3,485	4,318	4,600	298	-11	25	24	7	-21
Taiwan	1,109	1,354	1,577	1,600	75	-17	22	16	0	-49
Korea, Rep.	1,277	1,693	2,250	2,500	186	-9	33	33	11	-4
Hong Kong	400	436	488	500	37	1	9	12	0	9
Africa	2,134	1,784	2,272	2,400	184	-16	-16	27	6	7
North Africa	1,401	1,279	1,659	1,800	161	16	-9	30	8	20
Morocco	159	196	193	--	29	2	23	-2	--	53
Algeria	329	244	537	700	35	50	-26	120	30	30
Egypt	875	761	786	900	88	14	-13	3	15	9
Sub-Saharan	733	505	613	600	23	-44	-31	21	0	-39
Nigeria	158	67	44	--	4	-57	-58	-35	--	33
Rep. S. Africa	70	49	85	--	3	-63	-30	74	--	-63
Latin America & Caribbean	3,598	3,765	4,401	4,600	438	-21	5	17	2	70
Brazil	445	418	176	200	25	-20	-6	-58	0	47
Caribbean Islands	752	829	867	--	72	-2	10	5	--	7
Central America	334	377	413	--	34	-7	13	10	--	70
Colombia	137	115	178	--	11	-42	-16	55	--	22
Mexico	1,114	1,215	1,726	2,000	198	-29	9	42	16	191
Peru	108	140	174	--	7	2	30	24	--	-65
Venezuela	493	459	597	500	68	-32	-7	30	-16	70
Canada	1,466	1,776	1,973	2,000	125	-15	21	11	0	-23
Oceania	216	230	238	200	25	6	6	3	0	32
Total	26,309	27,876	35,334	38,000	3,360	-16	6	27	3	-16
Developed countries	13,954	15,031	17,883	18,400	1,615	-8	8	19	3	3
Less developed countries	10,719	11,498	14,346	15,000	1,257	-15	7	25	5	21
Centrally planned countries	1,636	1,347	3,106	4,600	488	-50	-18	131	48	65

*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1988 began Oct. 1, 1987 & ended Sept. 30, 1988. F = forecast.
 -- = not available.

Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 786-1822.

Farm Income

Table 32.—Farm Income Statistics

	Calendar year										
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F	1989 F
	\$ billion										
1. Farm receipts	133.8	142.0	144.1	147.1	141.1	146.8	149.1	140.2	143.7	157	153 to 159
Crops (incl. net CCC loans)	62.3	71.7	72.5	72.3	67.1	69.5	74.2	63.6	61.9	71	69 to 72
Livestock	69.2	68.0	69.2	70.3	69.4	73.0	69.8	71.5	76.2	80	79 to 82
Farm related 1/	2.2	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5.6	6	5 to 7
2. Direct Government payments	1.4	1.3	1.9	3.5	9.3	8.4	7.7	11.8	16.8	14	10 to 12
Cash payments	1.4	1.3	1.9	3.5	4.1	4.0	7.6	8.1	6.7	8	7 to 11
Value of PIK commodities	0.0	0.0	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7	1 to 2
3. Total gross farm income (4+5+6) 2/	150.7	149.3	166.4	163.5	153.1	174.9	166.1	159.8	169.8	172	182 to 187
4. Gross cash income (1+2)	135.1	143.3	146.0	150.6	150.4	155.2	156.7	152.0	160.5	170	165 to 169
5. Nonmoney income 3/	10.6	12.3	13.8	14.3	13.5	13.4	11.8	10.6	10.0	10	8 to 10
6. Value of inventory change	5.0	-6.3	6.5	-1.4	-10.9	6.3	-2.4	-2.8	-6	-8	8 to 10
7. Cash expenses 4/	101.7	109.1	113.2	112.8	113.5	116.6	110.2	100.6	103.3	113	115 to 119
8. Total expenses	123.3	133.1	139.4	140.0	140.4	142.7	134.0	122.3	123.5	132	136 to 140
9. Net cash income (4-7)	33.4	34.2	32.8	37.8	36.9	38.7	46.6	51.4	57.1	58	48 to 52
10. Net farm income (3-8)	27.4	16.1	26.9	23.5	12.7	32.3	32.2	37.4	46.3	40	44 to 48
Deflated (1982\$)	34.9	18.8	28.6	23.5	12.2	30.0	28.9	32.8	39.5	33	36 to 40
11. Off-farm income	33.8	34.7	35.8	36.4	37.0	38.9	42.6	44.6	46.8	49	48 to 51
12. Loan changes 5/: Real estate	13.0	9.9	9.1	3.8	2.3	-1.1	-6.0	-9.2	-7.7	-4	0 to 3
13. 5/: Non-real estate	11.2	5.3	6.5	3.4	0.9	-0.8	-9.6	-10.7	-4.9	-1	2 to 3
14. Rental income plus monetary change	6.3	6.1	6.4	6.3	5.3	8.9	8.8	7.8	6.8	9	7 to 9
15. Capital expenditures 5/	20.1	18.0	16.8	13.3	12.7	12.5	9.6	8.6	9.8	11	9 to 12
16. Net cash flow (9+12+13+14-15)	43.8	37.6	37.8	38.1	32.7	33.2	30.2	30.7	41.5	53	50 to 54

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast.

Information contact: Andy Bernat (202) 786-1808.

Table 33.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/										
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988 F	1989 F
	\$ billion										
Assets											
Real estate	706.2	782.9	784.7	748.8	739.6	639.6	558.6	510.1	522.6	553	560 to 570
Non-real estate	201.6	213.2	212.0	212.4	205.7	208.9	190.4	181.5	186.3	190	187 to 201
Livestock & poultry	61.4	60.6	53.5	53.0	49.7	49.6	46.3	47.6	57.6	61	60 to 64
Machinery & motor vehicles	85.8	93.1	101.4	102.0	100.8	96.9	87.6	80.3	73.9	74	74 to 78
Crops stored 2/	29.2	33.0	29.1	27.9	23.9	29.6	23.5	19.1	20.5	20	16 to 20
Financial assets	25.3	26.5	28.0	29.5	31.3	32.8	33.0	34.4	34.3	35	35 to 37
Total farm assets	907.8	996.1	996.7	961.2	945.3	848.5	749.0	691.6	708.9	743	752 to 762
Liabilities											
Real estate 3/	79.7	89.6	98.7	102.5	104.8	103.7	97.7	88.5	80.8	77	76 to 80
Non-real estate 4/	71.8	77.1	83.6	87.0	87.9	87.1	77.5	66.8	61.9	63	63 to 67
Total farm liabil.	151.6	166.8	182.3	189.5	192.7	190.8	175.2	155.3	142.7	139	139 to 147
Total farm equity	756.2	829.3	814.4	771.7	752.6	657.7	573.8	536.3	566.3	604	608 to 618
	Percent										
Selected ratios											
Debt-to-assets	16.7	16.7	18.3	19.7	20.4	22.5	23.4	22.5	20.1	18.7	18 to 20
Debt-to-equity	20.0	20.1	22.4	24.6	25.6	29.0	30.5	29.0	25.2	23.1	22 to 24
Debt-to-net cash income 454	454	488	556	497	523	493	376	302	250	241	280 to 290

1/ As of Dec. 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 786-1798.

Table 34.—Cash Receipts from Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1987	1988	Dec 1988	Jan 1989	1987	1988	Dec 1988	Jan 1989	1987	1988	Dec 1988	Jan 1989
	\$ million 2/											
North Atlantic												
Maine	243	233	20	20	170	191	21	20	413	424	40	40
New Hampshire	66	67	6	6	38	77	7	6	104	144	12	12
Vermont	377	360	32	34	35	52	7	3	412	412	39	37
Massachusetts	124	125	11	11	268	299	30	22	393	424	41	33
Rhode Island	12	13	1	1	63	65	9	3	75	78	11	4
Connecticut	196	192	18	20	170	208	14	37	366	400	33	57
New York	1,800	1,757	166	166	726	814	72	50	2,527	2,571	238	215
New Jersey	140	197	17	17	423	443	28	20	563	640	45	37
Pennsylvania	2,319	2,346	218	202	905	941	82	99	3,224	3,287	300	301
North Central												
Ohio	1,614	1,561	134	132	1,808	2,030	157	135	3,422	3,591	291	267
Indiana	1,856	1,721	148	145	2,016	2,370	130	207	3,872	4,091	278	352
Illinois	2,262	2,131	187	181	3,913	4,208	225	451	6,174	6,339	411	632
Michigan	1,285	1,254	116	107	1,219	1,498	136	121	2,504	2,752	252	227
Wisconsin	4,222	4,154	376	346	795	772	63	49	5,017	4,926	439	396
Minnesota	3,645	3,638	299	306	2,165	2,822	190	223	5,809	6,460	489	529
Iowa	5,270	5,224	451	472	3,510	4,028	331	333	8,780	9,252	783	804
Missouri	2,173	2,196	165	217	1,517	1,449	103	96	3,691	3,645	268	313
North Dakota	760	813	74	94	1,548	1,615	153	79	2,308	2,428	227	172
South Dakota	1,910	1,844	135	228	813	946	58	71	2,723	2,791	194	298
Nebraska	4,848	5,312	375	473	1,975	2,634	282	404	6,823	7,946	657	870
Kansas	3,914	4,332	311	490	1,807	2,333	276	288	5,722	6,665	588	779
Southern												
Delaware	370	455	41	45	114	150	9	5	485	605	50	51
Maryland	734	811	77	77	394	453	31	25	1,128	1,263	108	102
Virginia	1,244	1,414	102	102	448	591	50	39	1,692	2,005	152	142
West Virginia	169	174	13	13	52	70	6	6	221	243	19	19
North Carolina	2,081	2,106	175	177	1,634	1,996	121	64	3,715	4,103	296	241
South Carolina	461	441	34	37	470	600	53	31	931	1,041	87	68
Georgia	1,826	1,964	158	192	1,261	1,534	99	68	3,087	3,498	257	260
Florida	1,102	1,156	92	102	4,125	4,676	418	682	5,227	5,832	510	784
Kentucky	1,506	1,536	84	123	913	992	129	300	2,419	2,529	213	424
Tennessee	1,107	1,133	85	111	826	970	124	118	1,933	2,102	209	230
Alabama	1,560	1,814	119	152	588	709	62	72	2,148	2,523	180	224
Mississippi	1,040	1,185	92	102	939	1,167	280	126	1,979	2,352	372	229
Arkansas	2,116	2,204	173	177	1,027	1,712	207	115	3,143	3,916	380	292
Louisiana	521	528	38	38	899	1,315	257	128	1,420	1,844	295	166
Oklahoma	2,052	2,394	121	249	700	1,106	127	88	2,752	3,500	247	336
Texas	6,059	6,186	403	577	3,027	3,780	492	549	9,086	9,966	894	1,126
Western												
Montana	760	793	76	75	587	570	57	53	1,347	1,363	133	128
Idaho	926	1,075	90	106	1,120	1,279	145	101	2,047	2,354	234	207
Wyoming	528	539	38	40	114	155	26	11	642	694	64	51
Colorado	2,321	2,620	216	301	870	1,032	141	123	3,191	3,653	356	424
New Mexico	817	858	71	27	331	368	37	25	1,147	1,226	108	62
Arizona	774	778	34	48	1,007	1,198	168	157	1,781	1,976	203	204
Utah	462	470	39	38	134	150	16	15	596	619	54	53
Nevada	167	168	11	14	76	79	8	6	243	247	19	20
Washington	982	1,061	93	93	1,860	2,138	176	212	2,841	3,199	268	305
Oregon	655	676	64	55	1,206	1,430	108	102	1,861	2,106	172	157
California	4,741	5,055	400	388	10,781	11,828	1,185	735	15,522	16,883	1,584	1,122
Alaska	11	11	1	1	19	20	2	1	29	31	3	2
Hawaii	88	88	7	7	471	503	42	42	559	591	50	49
United States	76,218	79,162	6,206	7,143	61,876	72,365	6,950	6,717	138,094	151,528	13,156	13,860

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts from Farming

	Annual						1988					1989
	1983	1984	1985	1986	1987	1988	Jan	Sept	Oct	Nov	Dec	Jan
	\$ million											
Farm marketings & CCC loans*	136,567	142,436	144,015	135,102	138,094	151,528	13,023	14,596	16,314	15,194	13,156	13,860
Livestock & products	69,438	72,966	69,842	71,548	76,218	79,162	6,611	7,294	7,231	6,953	6,206	7,143
Meat animals	38,893	40,832	38,589	39,122	44,716	47,100	4,176	4,435	4,366	3,958	3,351	4,344
Dairy products	18,763	17,944	18,063	17,753	17,829	17,482	1,406	1,435	1,532	1,531	1,642	1,584
Poultry & eggs	9,981	12,223	11,211	12,678	11,487	12,289	861	1,218	1,186	1,156	1,066	1,048
Other	1,801	1,967	1,979	1,994	2,187	2,292	167	205	147	308	147	167
Crops	67,129	69,469	74,173	63,554	61,876	72,365	6,413	7,302	9,083	8,242	6,950	6,717
Food grains	9,713	9,740	8,993	9,631	5,411	7,679	472	712	762	521	572	597
Feed crops	15,535	15,668	22,520	16,982	13,061	15,286	1,564	1,426	1,536	1,597	1,334	1,426
Cotton (lint & seed)	3,705	3,674	3,687	3,551	4,027	4,670	653	274	566	874	1,290	729
Tobacco	2,752	2,813	2,722	1,918	1,827	2,039	217	492	319	368	145	374
Oil-bearing crops	13,546	13,641	12,474	10,592	10,800	13,323	1,402	1,567	3,024	1,615	913	1,369
Vegetables & melons	8,459	9,138	8,558	8,630	9,223	9,598	1,070	955	917	547	512	933
Fruits & tree nuts	6,056	6,737	6,843	7,288	7,869	8,652	333	911	1,015	1,136	930	574
Other	7,365	8,060	8,378	8,962	9,658	11,118	702	964	943	1,584	1,254	714
Government payments	9,295	8,430	7,704	11,813	16,747	14,480	667	419	2,658	513	468	330
Total	145,862	150,866	151,719	146,915	154,841	166,008	13,690	15,015	18,972	15,707	13,624	14,190

*Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar year									
	1980	1981	1982	1983	1984	1985	1986	1987	1988 F	1989 F
	\$ million									
Feed	20,971	20,855	18,592	21,725	19,852	18,015	16,179	16,093	20,600	20,000 to 24,000
Livestock	10,670	8,999	9,684	8,814	9,498	8,958	9,744	12,014	13,200	11,000 to 14,000
Seed	3,220	3,428	3,172	2,993	3,448	3,350	2,984	3,009	3,400	3,000 to 4,000
Farm-origin inputs	34,861	33,282	31,448	33,532	32,798	30,323	28,907	31,116	37,300	36,000 to 40,000
Fertilizer	9,491	9,409	8,018	7,067	7,429	7,259	5,787	5,392	5,900	6,000 to 8,000
Fuels & oils	7,879	8,570	7,888	7,503	7,143	6,584	4,790	4,442	4,600	4,000 to 6,000
Electricity	1,526	1,747	2,041	2,146	2,166	2,150	1,942	2,393	2,500	2,000 to 3,000
Pesticides	3,539	4,201	4,282	4,154	4,767	4,994	4,485	4,588	4,600	5,000 to 6,000
Manufactured inputs	22,435	23,927	22,229	20,870	21,505	20,987	17,004	16,815	17,600	18,000 to 22,000
Short-term interest	8,717	10,722	11,349	10,615	10,396	8,821	7,795	7,305	7,800	7,000 to 9,000
Real estate interest 1/	7,544	9,142	10,481	10,815	10,733	9,878	9,131	8,202	8,300	7,000 to 9,000
Total interest charges	16,261	19,864	21,830	21,430	21,129	18,699	16,926	15,508	16,000	15,000 to 17,000
Repair & maintenance 1/ 2/	7,075	7,021	6,428	6,529	6,416	6,370	6,426	6,546	7,000	7,000 to 8,000
Contract & hired labor	9,293	8,931	10,075	9,725	9,729	9,799	9,879	10,747	11,000	11,000 to 13,000
Machine hire & custom work	1,823	1,984	2,025	1,896	2,170	2,184	1,810	1,956	2,100	2,000 to 3,000
Marketing, storage, & transportation	3,070	3,523	4,301	3,904	4,012	4,127	3,652	3,823	3,400	4,000 to 5,000
Misc. operating expenses 1/	6,881	6,909	7,262	9,089	9,106	8,232	7,993	8,311	7,200	6,000 to 8,000
Other operating expenses	28,142	28,368	30,089	31,143	31,433	30,712	29,760	31,383	32,100	32,000 to 36,000
Capital consumption 1/	21,474	23,573	24,287	23,873	23,105	20,847	18,916	17,348	16,800	17,000 to 18,000
Taxes 1/	3,891	4,246	4,036	4,469	4,059	4,231	4,125	4,345	4,400	4,000 to 5,000
Net rent to nonoperator landlord	6,075	6,184	6,059	5,060	8,640	8,158	6,698	6,987	7,800	7,000 to 8,000
Other overhead expenses	31,440	34,003	34,381	33,402	35,805	33,236	29,739	28,680	29,100	28,000 to 31,000
Total production expenses	133,139	139,444	139,980	140,377	142,669	133,957	122,335	123,502	132,100	136,000 to 140,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast.

Information contacts: Chris McGath (202) 786-1804, Andy Bernat (202) 786-1808.

Table 37.—CCC Net Outlays by Commodity & Function

COMMODITY/PROGRAM	Fiscal year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 E	1990 E
	\$ million										
Feed grains	1,286	-533	5,397	6,815	-758	5,211	12,211	13,967	9,053	3,042	5,562
Wheat	879	1,543	2,238	3,419	2,536	4,691	3,440	2,836	678	279	1,052
Rice	-76	24	164	664	333	990	947	906	128	999	959
Upland cotton	64	336	1,190	1,363	244	1,553	2,142	1,786	666	2,538	994
Tobacco	-88	-51	103	880	346	455	253	-346	-453	-569	-280
Dairy	1,011	1,894	2,182	2,528	1,502	2,085	2,337	1,166	1,295	662	893
Soybeans	116	87	169	288	-585	711	1,597	-476	-1,676	-32	116
Peanuts	28	28	12	-6	1	12	32	8	7	5	4
Sugar	-405	-121	-5	49	10	184	214	-65	-246	0	0
Honey	9	8	27	48	90	81	89	73	100	60	55
Wool	35	42	54	94	132	109	123	152	175	89	98
Operating expense	157	159	294	328	362	346	457	535	614	583	635
Interest expenditure	518	220	-13	3,525	1,064	1,435	1,411	1,219	395	283	284
Export programs	-669	-940	65	398	743	134	102	276	200	116	107
Other	-113	1,340	-225	-1,542	1,295	-314	486	371	1,695	5,788	1,100
Total	2,752	4,036	11,652	18,851	7,315	17,683	25,841	22,408	12,461	13,843	11,579
FUNCTION											
Price-support loans (net)	-66	174	7,015	8,438	-27	6,272	13,628	12,199	4,579	-153	1,011
Direct payments											
Deficiency	79	0	1,185	2,780	612	6,302	6,166	4,833	3,971	5,889	7,006
Diversion	56	0	0	705	1,504	1,525	64	382	8	0	0
Dairy termination	0	0	0	0	0	0	489	587	260	200	189
Other	25	0	0	0	0	0	27	60	0	83	0
Disaster	258	1,030	306	115	1	0	0	0	6	0	0
Total direct payments	418	1,030	1,491	3,600	2,117	7,827	6,746	5,862	4,245	6,172	7,195
1988 crop disaster	0	0	0	0	0	0	0	0	0	3,613	0
Emergency livestock/ forage assistance	23	329	16	0	0	0	0	0	31	902	8
Purchases (net)	1,681	1,602	2,031	2,540	1,470	1,331	1,670	-479	-1,131	-10	519
Producer storage payments	254	32	679	964	268	329	485	832	658	319	174
Processing, storage, & transportation	259	323	355	665	639	657	1,013	1,659	1,113	654	443
Operating expense	157	159	294	328	362	346	457	535	614	583	635
Interest expenditure	518	220	-13	3,525	1,064	1,435	1,411	1,219	395	283	284
Export programs	-669	-940	65	398	743	134	102	276	200	116	107
Other	177	1,107	-281	-1,607	679	-648	329	305	1,757	1,364	1,203
Total	2,752	4,036	11,652	18,851	7,315	17,683	25,841	22,408	12,461	13,843	11,579

1/ Fiscal year 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by treasury. E = estimated in the fiscal 1990 President's Budget. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 447-5148.

Transportation

Table 38.—Rail Rates; Grain & Fruit/Vegetable Shipments

	Annual			1988					1989	
	1986	1987	1988	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Rail freight rate index 1/ (Dec. 1984=100)										
All products	100.7	100.1	104.8	103.2	105.4	105.4	105.3 P	105.4 P	105.9 P	105.9
Farm products	99.6	99.3	105.5	102.0	108.7	107.9	107.8 P	107.8 P	109.6 P	109.4
Grain	98.9	98.7	105.4	101.2	109.3	108.3	108.1 P	108.2 P	109.8 P	109.7
Food products	99.9	98.6	103.2	101.5	103.7	103.7	103.7 P	103.6 P	103.7 P	103.1
Grain shipments										
Rail carloadings (1,000 cars) 2/	24.4	29.0	30.6	32.8	28.9 P	30.7 P	27.1 P	27.4 P	30.2 P	30.1
Fresh fruit & vegetable shipments										
Piggy back (1,000 cwt) 3/ 4/	629	588	532	478	489	404	409	419	374	419
Rail (1,000 cwt) 3/ 4/	563	660	604	622	566	585	691	711	701	583
Truck (1,000 cwt) 3/ 4/	9,031	9,137	9,529	8,872	8,369	8,711	9,097	9,341	8,896	8,650
Cost of operating trucks										
hauling produce 5/										
Owner operator (cts./mile)	113.1	116.3	118.7	118.3	118.5	118.6	119.6	120.4	121.3	122.1
Fleet operation (cts./mile)	113.6	116.5	118.4	118.1	118.6	118.3	119.1	120.1	121.0	121.4

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1988 & 1989. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.G. Hutchinson (202) 786-1840.

Indicators of Farm Productivity

Table 39.—Indexes of Farm Production Input Use & Productivity

(See the March 1989 issue.)

Information contact: Jim Hauver (202) 786-1459.

Food Supply and Use

Table 40.—Per Capita Consumption of Major Food Commodities

(See the March 1989 issue.)

Information contact: Judy Putnam (202) 786-1870.

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